

Final Report

Superfund Subcommittee of the National Advisory Council for Environmental Policy and Technology

April 12, 2004

This is the Final Report of the Superfund Subcommittee of the National Advisory Council for Environmental Policy and Technology. The Subcommittee has completed its deliberations and its charter has ended. This final Subcommittee report has been transmitted in draft to the NACEPT Council for the Council's consideration.

~ NOTICE ~

The National Advisory Council for Environmental Policy and Technology is an independent federal advisory committee that provides recommendations to the Administrator of the U.S. Environmental Protection Agency on a broad range of environmental issues. NACEPT provides balanced and expert assessments of policy matters related to the environmental programs of the United States. Its operation is supported by the EPA. The Superfund Subcommittee of NACEPT was formed in June, 2002 to consider the role of the NPL, Superfund mega sites, and Superfund Program performance measures in the context of other federal, state, and Tribal programs. The findings and recommendations of the Subcommittee as reflected in this report do not necessarily represent the views of the Environmental Protection Agency.

Final Report

Superfund Subcommittee of the National Advisory Council for Environmental Policy and Technology

April 12, 2004

This is the Final Report of the Superfund Subcommittee of the National Advisory Council for Environmental Policy and Technology. The Subcommittee has completed its deliberations and its charter has ended. This final Subcommittee report has been transmitted in draft to the NACEPT Council for the Council's consideration.

Contents

Subcommittee Members

Introduction from the Chair

Executive Summary	i
I. Introduction	1
II. Background and Context for NPL/Mega Sites	7
III. Listing and Management of Sites on the NPL.....	25
IV. Mega Sites	69
V. Measuring Program Progress.....	79
VI. Additional Priority Issues.....	97
Glossary of Terms	111
List of Acronyms	115

Attachment A: Subcommittee Members' Individual Statements

Appendix I: Revised Charge to the Subcommittee

Appendix II: Original Charge to the Subcommittee

Appendix III: Memo from Elliott P. Laws Concerning Remedial Action Priority Setting

Appendix IV: Memo from Henry L. Longest II Concerning Guidance on Setting Priorities for NPL Candidate Sites

Appendix V: Performance Profile

Appendix VI: Additional Elements of Comprehensive Reporting

Appendix VII: Community Satisfaction Survey

List of Figures

Figure II-1:	How Sites Get Listed on the NPL.....	9
Figure II-2:	Pipeline Status of 1,518 Final and Deleted Sites on the NPL.....	12
Figure II-3:	Distribution of 142 Mega Sites by Region	14
Figure II-4:	All NPL Activity Type (Proposed, Final, Deleted).....	15
Figure II-5:	Activity Type (and Manufacturing Subtype) for 142 NPL Mega Sites	15
Figure II-6:	Actual/Planned Construction Obligations for 60 Fund- and Mixed-Lead Non-Federal NPL Mega Sites.....	18
Figure II-7:	Total Appropriations to the Superfund Program, 1993–2004.....	19
Figure II-8:	Superfund Program Expenditures by Category (e.g., Removal, Remedial), FY 2002 (Excludes ORD and OIG)	20
Figure II-9:	Superfund Expenditures by Office, FY 2003 (Total \$1.265 Billion).....	21
Figure II-10:	Superfund Expenditures—Programmatic and Administrative, FY 1999–2003	21
Figure II-11:	Superfund Cleanup Expenditures (Removal, Remedial Action, Long-Term Response Action), FY 1993–2003.....	22
Figure V-1:	Superfund Construction Completions by Fiscal Year.....	81

Subcommittee Members

All members served on the Subcommittee from June 2002 through March 2004 unless indicated with alternate dates.

Raymond Loehr – Chairman

Hussein M. Alharthy
Centennial Chair Emeritus
University of Texas at Austin
Lansdowne, VA

William Adams

Director of Environmental Science
Kennecott Utah Copper Corporation
Magna, UT

Sue Briggum

Director, Environmental Affairs
Waste Management, Inc.
Washington, DC

Doris Cellarius*

Vice Chair,
Environmental Quality Strategy Team
Sierra Club
Prescott, Arizona
(June 2003–March 2004)

Grant Cope*

Attorney
Earthjustice
Seattle, WA

James Derouin

Attorney
Steptoe & Johnson LLP
Phoenix, AZ

Richard Dewling

President
Dewling Associates, Inc.
Environmental Engineers and Scientists
Union, NJ

Steve Elbert

Senior Vice President
BP America, Inc.
Warrenville, IL

Jane Gardner

Manager & Counsel,
Remediation Programs
Corporate Environmental Programs
General Electric Company
Fairfield, CT

Mark Giesfeldt

Director,
Remediation and Redevelopment
Program
WI Department of Natural Resources
Madison, WI
(June 2002–March 2003)

* All individuals listed as Subcommittee members participated fully in the deliberations of the Subcommittee. Their perspectives helped to shape the consensus recommendations and are reflected in the range of views expressed throughout the Final Report. However, the individuals indicated do not support the document as a whole because of either their strongly held opposition to the ideas presented or the way in which the ideas have been described. For elaboration on dissenting opinions, please refer to the three-page individual statements in Attachment A.

Glen Hammer
Vice President,
Environmental Health and Safety
Ashland, Inc.
Columbus, OH

Dolores Herrera
Senior Advisor
Alianza Ambiental Center
Environmental Justice
Albuquerque, NM

Robert Hickmott
Senior Vice President
Smith-Free Group
Washington, DC

Aimee Houghton*
Associate Director
Center for Public Environmental
Oversight
Washington, DC

Ken Jack
Director, Environment Division
St. Regis Mohawk Tribe
Akwesasne, NY

Frederick M. Kalisz, Jr.
Mayor
City of New Bedford
New Bedford, MA

Gary King
Manager, Division of Remediation
Management
Bureau of Land
Illinois Environmental Protection Agency
Springfield, IL
(June 2003–March 2004)

Ed Lorenz
Chair, Pine River Superfund Task
Force/Professor of History and
Political Science
Alma College
Alma, MI

Mildred McClain
Executive Director
Harambee House, Inc.
Savannah, GA

Michael Mittelholzer
Director, Regulatory Affairs
National Association of Home Builders
Washington, DC

Tom Newlon
Attorney
Stoel Rives
Seattle, WA

Lindene E. Patton
Vice President and Counsel
Zurich Specialties
Zurich North America
Great Falls, VA

Victoria Peters
Senior Assistant Attorney General
Natural Resources and
Environment Section
Colorado Attorney General's Office
Denver, CO

Kate Probst
Senior Fellow
Resources for the Future
Washington, DC

Ed Putnam*
Assistant Director
Remedial Response Element
NJ Department of Environmental
Protection
Trenton, NJ

Catherine Sharp
Assistant Division Director
Land Protection Division
OK Department of Environmental
Quality
Oklahoma City, OK

* All individuals listed as Subcommittee members participated fully in the deliberations of the Subcommittee. Their perspectives helped to shape the consensus recommendations and are reflected in the range of views expressed throughout the Final Report. However, the individuals indicated do not support the document as a whole because of either their strongly held opposition to the ideas presented or the way in which the ideas have been described. For elaboration on dissenting opinions, please refer to the three-page individual statements in Attachment A.

Alexandra Shultz*

Director, Legislative and Regulatory Affairs
Earthworks (formerly known as Mineral Policy Center)
Washington, DC

Mel Skaggs

President
InDepth Environmental Associates
Southlake, TX

Richard Stewart

University Professor
Center on Environmental and Land Use Law
New York University School of Law
New York, NY

Wilma Subra

Technical Advisor
Louisiana Environmental Action Network
New Iberia, LA

Michael Tilchin

Vice President
CH2M HILL
Washington, DC

Jason White

Environmental Specialist
Office of Environmental Services
Cherokee Nation
Tahlequah, OK

Robin Wiener

President
Institute of Scrap Recycling Industries
Washington, DC

EPA Ex-officio Representatives:**Barry Breen**

Principal Deputy Assistant Administrator
Office of Solid Waste and Emergency Response
U.S. Environmental Protection Agency
Washington, DC

Phyllis Harris

Deputy Assistant Administrator
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency
Washington, DC

Lawrence Starfield

Deputy Regional Administrator
EPA Region 6
U.S. Environmental Protection Agency
Dallas, TX

The subcommittee was facilitated by the Meridian Institute and Ross and Associates Environmental Consulting, Ltd.:

John Ehrmann

Senior Partner
The Meridian Institute

Molly Mayo

Senior Mediator
The Meridian Institute

Elizabeth McManus

Senior Associate
Ross and Associates
Environmental Consulting, Ltd.

* All individuals listed as Subcommittee members participated fully in the deliberations of the Subcommittee. Their perspectives helped to shape the consensus recommendations and are reflected in the range of views expressed throughout the Final Report. However, the individuals indicated do not support the document as a whole because of either their strongly held opposition to the ideas presented or the way in which the ideas have been described. For elaboration on dissenting opinions, please refer to the three-page individual statements in Attachment A.

Introduction from the Chair

In the spring of 2002, the Superfund Subcommittee of the National Advisory Council for Environmental Policy and Technology (NACEPT) was established to assist the U.S. Environmental Protection Agency (EPA) in identifying the future direction of the Superfund Program. Specifically, the EPA Administrator asked that the Subcommittee “spur a national dialogue on the role of the National Priorities List (NPL), mega sites, and program performance measures” ... “in the context of other federal, state and Tribal waste cleanup programs.”

To accomplish this effort, the EPA Administrator appointed 32 senior-level individuals to the Superfund Subcommittee. The members reflected a wide range of interests and viewpoints from academia; business and industry; community and environmental advocacy groups; federal, state, local, and Tribal governments; and environmental justice, nongovernmental, and professional organizations. This breadth was intended to be reasonably representative of the concerns U.S. society has regarding reducing risks to human health and the environment at Superfund sites.

Throughout the Subcommittee’s many meetings and discussions, several major themes provided a basis for its deliberations:

- ➔ The overriding focus of the Superfund Program should be to improve the public health and environmental conditions at actual sites.
- ➔ There should be early, active and continuous involvement of all affected parties and communities in decisions related to Superfund sites.
- ➔ There should be efficiency in the use of appropriated Superfund monies and there should be adequate funds to investigate and clean up sites of concern.

The discussion and recommendations in this report relate to these major themes.

This report reflects 22 months of intense discussion and deliberations with strong opinions and different views provided by individual Subcommittee members. These discussions and deliberations occurred during nine multi-day public meetings, more than 20 work group meetings that focused on specific issues, more than 100 work group telephone conference calls and as part of a multitude of individual telephone calls to review and discuss additional specific issues, wording, and recommendations.

Although the report was drafted with EPA as the primary audience, many others should be interested in the report’s recommendations, comments and views for improving Superfund, such as Congress, other government entities, Tribal Nations, and representatives from environmental and citizen groups, industry, and the public.

While EPA provided the Subcommittee’s charge, background information, and ongoing guidance, in each case, the Subcommittee carefully and independently reviewed and

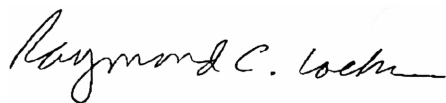
evaluated the material provided. In certain cases, the Subcommittee sought and considered additional information. Thus, the Subcommittee views this as being an independent report.

The Subcommittee appreciates the detailed factual material provided by EPA, the Agency for Toxic Substances and Disease Registry, the National Institute of Environmental Health Sciences, the Subcommittee members, and the individual members of the public who provided specific comments. However, the report is the product of the Subcommittee members only. Individuals and organizations that provided information to the Subcommittee, including EPA personnel, did not participate in the decisions made by the Subcommittee regarding the final content of this report.

I believe this report presents a fair and accurate summary of the comments, views and recommendations the Subcommittee wishes to forward to EPA. Where consensus was not reached on specific statements and recommendations, the report identifies the issues and presents the various points of view of the Subcommittee members. The recommendations, discussion and different points of view are provided to inform EPA as the Agency considers how best to adequately protect human health and the environment at actual and potential Superfund sites.

The Subcommittee looks forward to EPA's serious consideration and implementation of the advice provided in this report. By doing so, the Agency will improve national efforts to reduce the human and environmental risks associated with Superfund sites.

In closing, I would like to thank the Subcommittee members for the dedication, intellectual contributions, and extensive commitment of time and personal energy they contributed to the deliberations of the Subcommittee and to this report. This type of work is not easy, and the issues are complex. The members fulfilled their charge extremely well and have done so professionally and positively. It has been a pleasure working with them, the facilitators and the many individuals from EPA and other organizations who provided the Subcommittee with the rich material needed to complete its task.



Raymond C. Loehr, Chair
NACEPT Superfund Subcommittee

March 2004

Final Report

Superfund Subcommittee of the National Advisory Council for Environmental Policy and Technology

ES Executive Summary

This report was prepared as a result of a request from the EPA Administrator to help identify the future direction of the Superfund Program. This effort was conducted by the Superfund Subcommittee of the EPA National Advisory Council for Environmental Policy and Technology over a period of 22 months. The Subcommittee first met in June 2002 and completed this Final Report in March 2004.

Members of the Subcommittee consisted of 32 senior-level individuals from academia, business, and industry; community and environmental advocacy groups; federal, state, local, and Tribal organizations; and environmental justice, nongovernmental, and professional organizations. The Subcommittee was specifically asked to consider the role of the Superfund Program's National Priorities List (NPL), how best to address mega Superfund sites, and approaches that can be used to measure the Program's performance and progress. During the Subcommittee's deliberations, a number of additional important issues arose. These issues are identified and discussed in Chapter VI of this report.

The Subcommittee met nine times between June 2002 and March 2004. The original term of the Subcommittee members was to be from May 2002 to December 2003. That term was extended to March 31, 2004, by Acting EPA Administrator Marianne Horinko to allow the Subcommittee adequate time to complete its discussions and deliberations and this Final Report

EPA ex officio Subcommittee members participated in discussions at meetings and in conference calls to clarify current procedures, provide background and updates on the Superfund Program, and, where appropriate, provide insights into the practical implications of implementing recommendations being considered by the Subcommittee. EPA representatives did not participate in the Subcommittee's final decision making. The

Agency also supported Subcommittee deliberations by making staff available to present informational briefings and provide relevant information to the Subcommittee. The Agency also provided the Subcommittee with professional facilitators (a partnership of Meridian Institute and Ross and Associates Environmental Consulting) who assisted the Subcommittee throughout its deliberations by facilitating meetings, developing meeting summaries and developing the draft documents and reports that were reviewed by the Subcommittee members at the public meetings. While the facilitators prepared the various reports, the statements in this Final Report represent the views of the Subcommittee itself.

In developing this report, Subcommittee members discussed their views on many complex and interrelated issues. This Final Report is an integrated package that represents the Subcommittee's best effort to formulate consensus recommendations and to present differing views on the complex issues considered by the Subcommittee. The divergent views were included in the report in an effort to provide value and be responsive to the requests of the Agency. In her remarks made at the Superfund Subcommittee's September 3, 2004, meeting in Washington, D.C., Assistant Administrator Marianne Horinko indicated that, in the absence of consensus on difficult issues, the Agency was interested in receiving clearly articulated details of the strongly held, divergent views on issues that the Subcommittee discussed but could not reconcile.

Between Subcommittee meetings, small working groups of Subcommittee members spent countless hours interacting via conference calls, through e-mail, and in face-to-face meetings to continue deliberations and develop options and recommendations for consideration by the full Subcommittee. Thus, this report has resulted from continual, serious, and often intense discussion of these complex issues.

The report was developed through a cooperative drafting process and an open review process. Many individuals contributed text to the seven report drafts, and all members were asked to comment on the drafts through a variety of mechanisms. Each version of the report attempted to blend the range of individual comments submitted into a narrative that reflected the perspective of the Subcommittee as a whole. This Final Report is not a compilation of individual views. The Subcommittee worked to reach the greatest degree of consensus possible among the wide range of views reflected in its membership. Consensus was defined as "an outcome that everyone can live with," though aspects of any particular finding or recommendation may not be the first choice of individual members. When consensus was not reached, this Final Report describes the range of views held by Subcommittee members.

As indicated, the deliberations throughout the 22 months of Subcommittee discussion revealed a range of views regarding some topics associated with the charge. Although the members worked very hard to formulate consensus recommendations on all of the issues addressed in this report, consensus recommendations on every topic could not be reached. In such situations, the differing views are presented as accurately as possible to fairly reflect the deliberations and range of opinions. In addition, if Subcommittee members wanted to provide additional clarification or elaboration, they had the option of indicating their support for or disagreement with a particular recommendation or

discussion through a footnote or a three-page individual statement. The individual or joint statements submitted by 21 of the Subcommittee members are included in Attachment A.

Except as noted, all members of the Subcommittee agree with the consensus recommendations in this Final Report. Issues on which consensus could not be reached are noted in this Executive Summary, but readers should consult the full report for a summary of the Subcommittee's views on those issues. On a number of issues, Subcommittee members held fundamentally different views. The Subcommittee urges readers to go beyond the major recommendations, and read the comments, logic, and differing views provided to sharpen the focus and dialogue concerning the effectiveness of the Superfund Program.

Because the issues addressed in this report are complex, have many important facets, and affect different parts of society in varying ways, they will be the focus of continuing dialogue. However, the goal of all parties interested in and affected by the Superfund Program is the need to reduce the risks to human health and the environment associated with Superfund sites. The Subcommittee trusts that the information and advice in this report will help the Agency and the nation achieve this goal.

While this report was prepared with the assumption that EPA is its primary audience, many others should be interested in the report, such as Congress, other governmental entities, environmental and community groups, Tribal Nations, industry, and the public. The Subcommittee looks forward to EPA's and other interested parties' serious consideration of the report's discussions, views, advice and recommendations.

In addition to chapters providing background and introductory information, the report has three chapters that contain the Subcommittee's recommendations according to the three main issues outlined in EPA's charge (use of the NPL, mega sites, and performance measures) and a final chapter that contains recommendations on additional important issues discussed by the Subcommittee. The recommendations in these chapters should not be considered in isolation; they are a package. To emphasize the interconnectedness of the Subcommittee's recommendations, they are grouped in this Executive Summary in terms of the following five major themes:

Increase the Transparency and Rigor of EPA Decision Making

EPA has the responsibility to make difficult choices about site cleanup. If a site is listed on the NPL, choices about remedy selection and implementation are made in the context of the open, public process associated with NPL cleanups. Choices about how many and what types of sites to list on the NPL and choices about which NPL sites receive Superfund money to pay for site evaluation and cleanup also need to be made in a transparent fashion.

Awareness and understanding of these difficult decisions serve EPA, officials at other levels of government, Tribal Nations, affected communities, and potentially responsible parties (PRPs). EPA must recommit to its existing coordinating practices and reach out effectively to affected communities and PRPs.

The Subcommittee makes six recommendations to increase the rigor and transparency of EPA decision making:

- ➔ EPA should apply a set of consistent factors from year to year to choose which NPL-eligible sites to propose for listing in each listing cycle. (Recommendation 1.)
- ➔ EPA should work with stakeholders to review the application of the hazard ranking system (HRS) model to ensure that it (1) accurately characterizes threats at sites located in sparsely populated areas and appropriately considers environmental justice concerns, traditional lifestyles, and other issues; and (2) uses site-specific data that EPA determines are available and reliable rather than defaulting to presumptions in the HRS to estimate exposures. (Recommendation 4.)
- ➔ EPA should improve the information and data on the Superfund Program and publish an annual report that presents key data on the Program, including Program progress and expenditures, anticipated costs, a summary of sites considered for listing, and the listing decisions and criteria applied. (Recommendation 5.)
- ➔ EPA should establish standard protocols to ensure that regional offices publicly communicate available information on site conditions and current and potential future threats to humans and the environment: (A) when a site is dropped from the Superfund site assessment process; and (B) when an NPL- candidate site is not proposed for NPL listing. (Recommendation 6)
- ➔ EPA should develop a system to track, evaluate and increase the effectiveness and the performance of land-use controls and long-term stewardship at NPL sites(Recommendation 16)
- ➔ EPA's strategy for Superfund Alternatives Sites (SASs) should remain a small pilot program until significantly more input is received from a broad range of perspectives, and an independent body produces for public review and comment a report describing the extent and performance of the SAS program and its compliance with the Comprehensive Environmental Response, Compensation and Liability Act. (Recommendation 17)

The Subcommittee also discussed, but did not reach consensus on, specific factors that EPA might consider to determine which NPL-eligible sites to propose for listing on the NPL, and the role that estimates of cleanup cost and Program funding should play in NPL listing decisions.

In addition, the Subcommittee held strong and divergent views about the role that risk should play in decisions about the types of sites that are eligible for the NPL and management and cleanup of listed sites.

Spend Resources Wisely

Both public and private resources available for environmental cleanups are not unlimited. A consistent theme during the Subcommittee's deliberations was the need for the Superfund Program to use its resources wisely. In this context, the Subcommittee discussed, but did not reach consensus on, leveraging resources from non-Superfund programs, setting priorities for funding among sites listed on the NPL, whether resources should be shifted to removals and remedial actions and away from other Agency activities, auditing Superfund spending trends with a view towards identifying efficiencies, contract reforms, financial assurances, and the role of prevention relative to the Superfund Program.

In addition, the Subcommittee vigorously debated and has strongly held and divergent views about whether the Superfund Program should receive a temporary, limited supplemental appropriation to address the backlog of remedial actions that are ready for construction.

Expand Efforts at Coordination and Collaboration

EPA must coordinate effectively with a wide range of partners for the Superfund Program to be effective. Decisions about how to best address a contaminated site are site-and community-specific. No two sites or communities present the same set of challenges or imperatives. Increased coordination and collaboration will bring forward important information about actual and potential releases, the potential use of other environmental programs, and community-specific concerns and priorities. This information, and the involvement of stakeholders, will help EPA make better, more informed and inclusive, decisions about sites.

The Subcommittee makes five recommendations related to coordination and collaboration.

- ➔ EPA regional offices should continue and improve collaboration with states, local governments, and Tribal nations as they consider which sites to recommend to EPA headquarters for NPL listing. (Recommendation 2)
- ➔ EPA should reach out to potentially affected communities, local governments, and potentially responsible parties earlier in the Superfund site assessment process to share and solicit information about sites being considered for NPL listing. (Recommendation 3)
- ➔ EPA should (A) ensure that regional offices have knowledge and understanding of the capabilities and applicability of non-Superfund programs; (B) develop relationships with key managers in other programs, particularly federal programs, to facilitate coordination; and (C) promote greater standardization of coordinating mechanisms, particularly for large, complex sites. (Recommendation 7.)

- ➔ EPA should continue to invest in capacity building for state and Tribal cleanup programs. (Recommendation 8)
- ➔ EPA should improve its cooperative relationship with the Agency for Toxic Substances and Disease Registry (ATSDR). EPA, in coordination with ATSDR, should make a concerted effort to work with affected communities, states, and Tribal nations to regularly identify, on a site-specific and nationwide basis, projects and research efforts that would be most helpful in determining adverse health effects posed by releases of hazardous substances, thereby informing decisions related to NPL listings, investigations, and remedy selection and implementation. EPA should include recommendations both in proactive suggestions for projects, and in reactive comments on ATSDR proposed projects. ATSDR's responsiveness to these recommendations should be included in EPA's (annual) reporting. (Recommendation 13)
- ➔ EPA should establish a transparent and cooperative relationship with the National Institute of Environmental Health Sciences (NIEHS) to provide recommendations and rationale for research, and to become educated on the efforts and findings of NIEHS. In so doing, EPA Site Managers and Community Involvement Coordinators should be educated as to the resources available from NIEHS (and ATSDR) and should always inform the community of these resources. (Recommendation 14)
- ➔ EPA, working with ATSDR and NIEHS, should convene a national dialogue on the roles of ATSDR and NIEHS in the Superfund Program. (Recommendation 15)

The Subcommittee also discussed, but did not reach consensus on the circumstances under which non-Superfund programs should be used at NPL-eligible sites, the expansion of technical assistance grants to certain NPL-eligible sites that are not proposed for the NPL, and the need for a national-level dialogue to address effective community involvement and issues unique to federal facilities.

Expensive Cleanups Deserve Special Attention

In many ways, mega sites present the same types of challenges posed by other NPL sites, except that the high cost of mega site cleanups means that decisions about how to best address them have greater impacts on the Superfund budget. Subcommittee members had widely divergent views about whether mega sites warranted a fundamentally different cleanup approach than that currently provided by the Superfund Program. These views are described briefly in Chapter IV of the report. However, even in the context of these divergent views, the Subcommittee agreed that when mega sites are addressed by the Superfund Program, they warrant special attention. The Subcommittee makes one recommendation related to the management of mega site clean ups: EPA should establish practices that result in mega sites' receiving the necessary resources and attention from senior Agency managers. (Recommendation 9)

The Subcommittee also discussed, but did not reach consensus on, whether EPA should consider carrying out an expanded site inspection/remedial investigation at large complex sites and how EPA should best make decisions about large geographic areas.

Measure and Communicate Progress and Performance Comprehensively

It is an axiom that what is measured is done. This means that measurements of the progress and performance of the Superfund Program should illustrate the Program's core purpose. However, measures currently used by the Superfund Program, such as "construction complete" tell only part of the story. The Subcommittee makes three recommendations about improving measures of Program progress.

- ➔ EPA should apply the following National Priority Measures to its national-level reporting requirements:
 - > number of sites with all final remedies selected,
 - > number of construction completions at the site level,
 - > percentage of construction completions at the operable unit level, and
 - > number of sites deleted from the NPL (Recommendation 10).
- ➔ EPA should continue with its efforts to develop and implement a system to ensure clear, transparent dissemination of a core set of data for all NPL sites and Superfund Program activities. (Recommendation 11)
- ➔ EPA should develop measures of performance that assess the effectiveness of Agency coordination with Tribal, state and local governments and community stakeholders. (Recommendation 12)

Finally, Attachment A contains the three-page comment papers submitted by Subcommittee members to elaborate on their individual perspectives and the Appendices contain supporting documents and elaboration on the topics addressed in the body of the report.

I. Introduction

In July 2001, the Deputy Administrator of the U.S. Environmental Protection Agency (EPA) directed the development of an action plan to address the recommendation in the Resources for the Future report to Congress *Superfund's Future: What Will It Cost?*¹ regarding the future of the Superfund Program's National Priorities List (NPL). The action plan called for the creation of a Superfund Subcommittee under the auspices of the National Advisory Council for Environmental Policy and Technology, an EPA advisory committee under the Federal Advisory Committee Act. This Subcommittee was established in June 2002 to spur a national dialogue on the role of the NPL, Superfund mega sites, and Program performance measures in the context of other federal, state, and Tribal programs.

Members of the Subcommittee were senior-level individuals from academia; business and industry; community and environmental advocacy groups; federal, state, local, and Tribal governments; and environmental justice, nongovernmental, and professional organizations.

EPA's Charge to the Subcommittee

EPA's charge to the Subcommittee asked specifically for advice in three areas:

- ➔ **Determining the Role of the National Priorities List**—What should be the role of the NPL? For example, how should it be used in the context of other cleanup programs, who should be consulted with regard to determining the sites that are listed, and what types of sites should be listed?
- ➔ **Addressing Mega Sites**—How can EPA best address mega sites (defined as sites where total cleanup costs are expected to exceed \$50 million)? For example, should cost continue to be the determining factor when identifying mega sites, are there viable alternatives for placing mega sites on the NPL and/or containing their costs, are there feasible and reasonable policy options for addressing these sites, and do mega sites have unique aspects that might require a different decision-making process for NPL listing?
- ➔ **Measuring Performance and Progress**—EPA did not ask specific questions regarding measuring the Superfund Program's progress or performance, but noted that the Agency expected to share new ideas it was formulating regarding measures and would seek the Subcommittee's feedback on those ideas.

After reviewing the EPA charge, the Subcommittee discussed and elaborated on these three major topics to incorporate additional issues of concern to members of the

Subcommittee. The original charge and the modified charge accepted by the Subcommittee are included in Appendix I and II.

The Deliberative Process

The Subcommittee met nine times between June 2002 and March 2004. The original term of the Subcommittee members was to be from May 2002 to December 2003. That term was extended to March 31, 2004, by Acting EPA Administrator Marianne Horinko to allow the Subcommittee adequate time to complete its discussions and deliberations and this Final Report. Between Subcommittee meetings, small working groups of Subcommittee members spent countless hours interacting via conference calls, through email and in face-to-face meetings to continue deliberations and develop options and recommendations for consideration by the full Subcommittee. Thus, this report has resulted from continual, serious, and often intense discussion of these complex issues.

Public and Ex Officio Participation

EPA ex officio Subcommittee members participated in discussions at meetings and in conference calls to clarify current procedures, provide background on and status of the Superfund Program, and, where appropriate, provide insights into the practical implications of implementing recommendations being considered by the Subcommittee. The Agency also supported Subcommittee deliberations by making staff available to provide informational briefings and other materials to the Subcommittee. The Agency also provided professional facilitators who assisted the Subcommittee throughout its deliberations by facilitating meetings and developing meeting summaries and draft reports. EPA representatives did not participate in the Subcommittee's final decision making.

In accordance with the requirements of the Federal Advisory Committee Act, notices of full Subcommittee meetings were published in the Federal Register, and the meetings were open to the public. Opportunities for public comment were provided at each meeting, and the public comments are included in the meeting transcripts. Meeting agendas, transcripts, and other materials are available through the Superfund Docket at www.epa.gov/edocket or by phone at 202-566-0276 and reference docket #SFUND-2002-0005.

The Consensus Process

In developing this report, Subcommittee members discussed their views on many complex and interrelated issues. This final report is an integrated package that represents the Subcommittee's best effort to formulate consensus recommendations. The report was developed through a cooperative drafting process and an open review

process. Many individuals contributed text to the seven drafts of the report. All members were asked to comment on the drafts through a variety of mechanisms.

Each revision of the report attempted to blend the range of individual comments submitted together into a narrative that reflected the perspective of the Subcommittee as a whole. The report is not a compilation of individual views. The Subcommittee worked to reach the greatest degree of consensus possible among the wide range of views reflected in its membership. Consensus was defined as “an outcome that everyone can live with,” though aspects of any particular finding or recommendation may not be the first choice of individual members. When consensus was not reached, the report describes the range of views held by Subcommittee members.

During the Subcommittee’s deliberations, a number of additional important issues arose that the Subcommittee believes are important to the success of the Superfund Program and, therefore, that EPA should seriously consider. They are discussed in Chapter VI.

The deliberations also revealed a range of views regarding some topics associated with the charge. Although the members worked very hard to formulate consensus recommendations on all of the issues addressed in the report, consensus recommendations on every topic could not be reached. In such situations, the differing views are presented as accurately as possible to fairly reflect the deliberations and range of opinions. However, in trying to succinctly characterize the differences of opinion, the Subcommittee may have sacrificed some degree of detail regarding individual positions or nuance. In some cases, the Subcommittee was unable to resolve differences of opinion about how to present a recommendation or range of views and, therefore, could not reach consensus on final text. In those cases, members were given the option of using a footnote to indicate the specific portion(s) of the report they could not live with. Additionally, in any situation where members wanted to provide additional clarification or elaboration on their opinions, they had the option of submitting personal comments or views in the form of three-page individual statements, which are included in Attachment A.

Organization of the Report

The body of the report begins with the Introduction, which provides a summary of the key characteristics of the process and the report. The background chapter that follows discusses the critical background material that helped to provide a foundation for the Subcommittee’s deliberations. The background material provides a brief overview of the NPL listing and cleanup processes, the composition of the NPL, and key budget data. The following three chapters address the three issues in the charge: use of the NPL (Chapter III), mega sites (Chapter IV), and measures of program progress and performance (Chapter V). Chapter VI discusses additional priority issues that warrant serious consideration and follow-up. Finally, the appendices contain supporting documents and elaboration on the topics addressed in the body of the report. Additionally, Attachment A contains the three-page individual statements submitted by

Subcommittee members to elaborate on their personal perspectives or issues that they believe are not adequately addressed in the body of the report.

¹ Probst, Katherine N., et al. *Superfund's Future: What Will It Cost?* Washington, DC: Resources for the Future, 2001.

II. Background and Context for NPL/Mega Sites

This chapter provides an introduction to the Superfund Program, including the site investigation and cleanup process, the status and composition of the current National Priorities List (NPL), and the Program budget. It is not intended to be a comprehensive or detailed description of the Superfund Program or law. Rather, it is intended to provide context for the Subcommittee's recommendations and to assist readers who may be less familiar with the Superfund Program and its history. Wherever possible, this chapter relies on independent sources of information and data, such as reports from the General Accounting Office (GAO) and the Office of the Inspector General (OIG). This chapter also relies heavily on information provided by EPA, which was not independently verified for accuracy. During the course of the Subcommittee's deliberations, a number of unresolved differences were noted among data presented to the Subcommittee, including differences between EPA data and data represented in GAO and OIG reports. This chapter cites the source of information for all charts and tables.

Origin and Growth of the Superfund Program

In 1980 Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), more commonly known as Superfund, to provide for cleanup of releases of hazardous substances. The Superfund Program implements two basic types of cleanups: (1) remedial actions, which generally are long-term cleanup actions at sites listed on the NPL; and (2) removal actions, which generally are shorter-term cleanups needed to mitigate more immediate threats at listed and unlisted sites.¹ Remedial actions generally are designed to provide a permanent remedy and thus can take a considerable amount of time and money, depending on the nature of the contamination being addressed. Cleanups at NPL sites progress through several steps which include investigation and study, remedy selection and design, and remedy implementation. Because the Subcommittee's deliberations focused on the remedial action program, the remainder of this chapter focuses on facts related to that program and not to the removal program.

Under CERCLA, EPA has the authority to clean up hazardous substance releases itself (typically by hiring environmental contractors to do the work in the field) or to compel responsible parties to perform clean up. CERCLA initially established a \$1.6 billion Trust Fund, financed primarily by taxes on crude oil and certain chemicals, for EPA to implement the Program and pay for clean ups. The implementing regulations provide that a site must be listed on the NPL to receive financing for remedial actions.²

In 1986, Congress amended CERCLA with the Superfund Amendments and Reauthorization Act (SARA). The SARA amendments, among other things, emphasized the importance of human health considerations, community involvement, cooperation with state and local governments, and permanent cleanup remedies, and provided guidance on cleanup standards. SARA also increased the ceiling amount of the Trust Fund to \$8.5 billion and added a third taxing mechanism, the corporate environmental income tax.

The Superfund Program has over 3,000 full-time-equivalent (FTE) staff, largely located in the ten EPA regional offices. Regional staff coordinate site assessments and investigations; make decisions about what sites need removal or remedial action; carry out site-related oversight, enforcement, community involvement, and other activities; and oversee the work of EPA contractors hired to carry out site investigation and response activities financed by the Superfund Program. Regional staff also largely are responsible for coordination with officials in state and local governments and Tribal Nations, who are critical partners in the Program's successful implementation.

Staff at EPA headquarters are responsible for the Superfund Program's overall coordination, management and development, and policy direction. NPL listing decisions are also made at EPA headquarters, by the Assistant Administrator for the Office of Solid Waste and Emergency Response (OSWER).

In fiscal year (FY) 2002, there were approximately 2,500 FTEs in the regional offices and 644 FTEs at EPA headquarters. In addition to funding staff in OSWER, the Superfund Program budget funds staff and other activities in offices that support enforcement (e.g., the Office of Enforcement and Compliance Assurance (OECA) and Department of Justice (DOJ)); management (e.g., the Office of Administration and Resources Management (OARM), Office of the Administrator (OA), Office of the Inspector General (OIG), Office of the Chief Financial Office (OCFO), Office of Environmental Information (OEI), Office of Program Planning and Evaluation (OPPE)); and technology (e.g., the Office of Research and Development (ORD)). In FY 2003, these offices outside of OSWER received \$404.3 million of the \$1.265 billion total Superfund operating budget,³ nearly one-third of the total budget.

At the end of 1995, the taxing authority that was used to finance the Superfund Trust Fund expired. The Fund continues to receive revenue from other sources, including cost recoveries, interest from investments, fines, and penalties. Since 1995, the Program has been increasingly funded through appropriations from general revenues (see page 14 for further discussion on appropriations).

How Sites Get Listed on the NPL

The Superfund process begins when a potentially hazardous site is reported to EPA, usually by a state environmental agency, but sometimes by local or Tribal governments, individuals, and community groups. The EPA regional office, often in conjunction with a state environmental agency, carries out a pre-screening evaluation to verify that hazardous substances are present at the site and to evaluate whether the site is covered by EPA's Resource Conservation and Recovery Act (RCRA) program or state programs. When EPA determines that the Superfund site assessment process is warranted, the Agency enters information about the sites into the Comprehensive Environment Response, Compensation, and Liability Act Information System (or CERCLIS), which is the Agency's database of sites that may need action under Superfund, and the Superfund site assessment process begins. In FY 2003, EPA added more than 240 sites to CERCLIS.⁴

The Superfund site assessment process is carried out largely by EPA regional offices, working with state environmental agencies and Tribal Nations. This process has a number of steps, each designed to send forward only the sites that warrant additional attention under Superfund. Sites may not undergo further assessment for a number of reasons, including a determination that no further remedial action under CERCLA is planned (NRFAP); a determination that an assessment using the Hazard Ranking System (HRS) most likely would not result in an HRS score of 28.5, the threshold for NPL eligibility; or referral of the site to another environmental cleanup program. Sites that

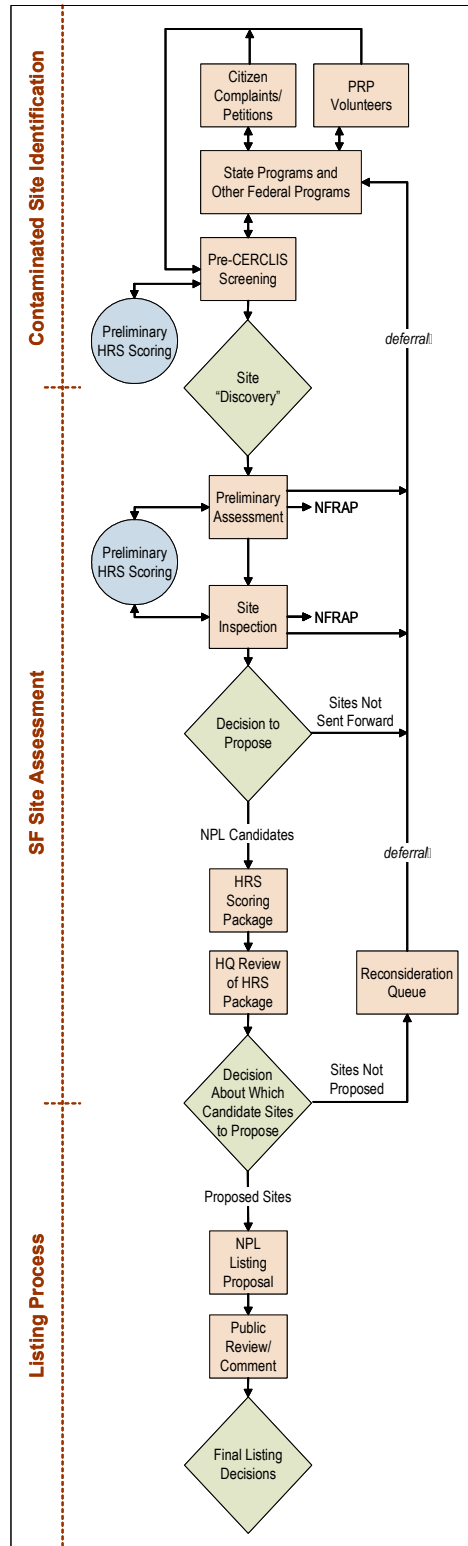


Figure II-1: How Sites Get Listed on the NPL

→ Superfund Alternative Sites

Some sites that are eligible for the NPL may not be listed and instead may be designated as a Superfund Alternative site (SAS). EPA's goal for the SAS program is a process that results in cleanups by responsible parties equivalent to NPL sites, without actually listing the site on the NPL. Sites must meet the National Contingency Plan criteria for listing (i.e., HRS of 28.5 or higher), require long-term response (i.e., remedial action), and have fully viable, cooperative responsible parties. State and Tribal Nation involvement is similar to NPL sites, including consultation on the SAS designation, notice of enforcement actions, and remedy selection.^a

As of the end of FY 2003, there were 109 SASs, accounting for a total expenditure from the Superfund Program of approximately \$227 million between FY 1983 and FY 2003. For FY 2003, expenditures on SASs totaled \$13.4 million. These funds are primarily spent on removal actions (42%) and other costs associated with the early stages of the Superfund process, including site investigation, feasibility studies, and community involvement—all activities that may have been started while the SAS enforcement agreement is negotiated.^b

^a See OSWER 92-08.0-17, *Response Selection and Enforcement Approach for Superfund Alternative Sites*.

^b Information provided by EPA to the Subcommittee on December 5, 2003.

are not screened out during the Superfund site assessment process and that have an HRS score of 28.5 or greater are considered NPL-eligible sites.

From among the identified NPL-eligible sites, EPA regional offices choose which sites to submit to EPA headquarters for possible addition to the NPL. Regions make these decisions by considering, in a qualitative sense, a variety of factors, including the severity of the contamination, the urgency of the problem, and the types of environment affected. EPA guidance⁵ specifies that high priority should be given to the following types of sites:

- Current human exposure to hazardous substances, pollutants or contaminants;
- Documented contamination, especially at or above a health-based benchmark (SARA Section 118 requires that a site be considered a high priority where releases have resulted in closing drinking-water wells or have contaminated a principal drinking-water supply);
- Proximity to a large potentially affected human population;
- Documented contamination of a sensitive environment or fishery;
- State recommendation that the site be listed on the NPL; or,
- The Agency for Toxic Substances and Disease Registry has or is planning to issue a health advisory related to the site or to activities associated with the site.

EPA headquarters works with the regional offices during this process by evaluating HRS scoring for the site to ensure that only sites with technically and legally defensible scores of 28.5 or higher are sent forward, and by ensuring that Superfund Program guidance is

properly applied. NPL-eligible sites that the regional offices identify as priorities are sent forward to headquarters for proposed addition to the NPL. Sites that the regions send forward are referred to as NPL candidates and represent a subset of NPL-eligible sites.

Beginning in 2002, EPA established a new step in the Superfund site assessment process, whereby the entire pool of NPL candidate sites submitted to headquarters by the regions undergoes an additional evaluation by a committee made up of regional and headquarters personnel. According to EPA officials, this group primarily considers risks to human health and the environment and the urgency of the need for response to further prioritize NPL candidate sites. It also considers program management factors, such as projected costs to the Superfund Program and timing of funding needs; maintaining a strong enforcement program; leveraging cleanups by others; land use potential; and state, Tribal and community support for listing. This additional step in 2002 represents the first time cost was considered as a factor for listing sites on the NPL.

Those discussions are then considered by headquarters staff, who develop options for recommending NPL candidate sites to the Assistant Administrator for the OSWER. The Assistant Administrator makes the final decision about which sites to propose for NPL listing. Listing proposals are then published in the *Federal Register* for public review and comment. EPA considers all comments received during a 60-day comment period and then makes a final listing decision that is also published in the *Federal Register*. Historically, EPA has finalized the majority of listings that it proposes.

What Happens Once a Site Is on the NPL

Once a site is listed on the NPL, the remedial—or clean up—process starts. The first step in the remedial process is a remedial investigation and feasibility study (RI/FS), during which a site is investigated to characterize the nature and extent of contamination and contaminant sources, to calculate the risks posed by such contamination, and to identify and evaluate remedial options. The culmination of the RI/FS is EPA's issuance of a Proposed Plan for remediation. After public review and comment on the Proposed Plan, a Record of Decision (ROD) is issued. The selected remedy is then designed (the remedial design (RD) phase) and implemented (the remedial action (RA) phase).

Sites are often divided by geography, pathways of the contamination (e.g., groundwater), or type of remedy into smaller units, known as operable units. Sites with multiple operable units often move through the process described above in different time frames, resulting in multiple actions of the same type, rather than in the linear method described.

When physical construction of the remedy is complete, a site generally is identified as “construction complete.” After the remedial action phase, a site enters the operation and maintenance (O&M) phase of cleanup, during which remedy implementation and monitoring continues. For federally financed remedial actions, once the action is completed, the responsibility and cost for O&M transfer to the state. Once remedial goals have been achieved, EPA may delete a site from the NPL, even though O&M continues.

If a remedy involves groundwater or surface water restoration, achievement of remedial goals may take several decades. When such a remedy is federally financed, the site moves into a long-term response action (LTRA) phase after the remedial action phase. LTRA is eligible for federal funding for a period of up to ten years, after which time the responsibility and continued implementation costs of the remedy transfer to the state.⁶ Figure II-2 represents the pipeline status of the most advanced operable unit of each of the 1,518 sites on the NPL at the end of FY 2003, including the 274 sites considered deleted. Sites that are proposed for the NPL are not represented in this chart.

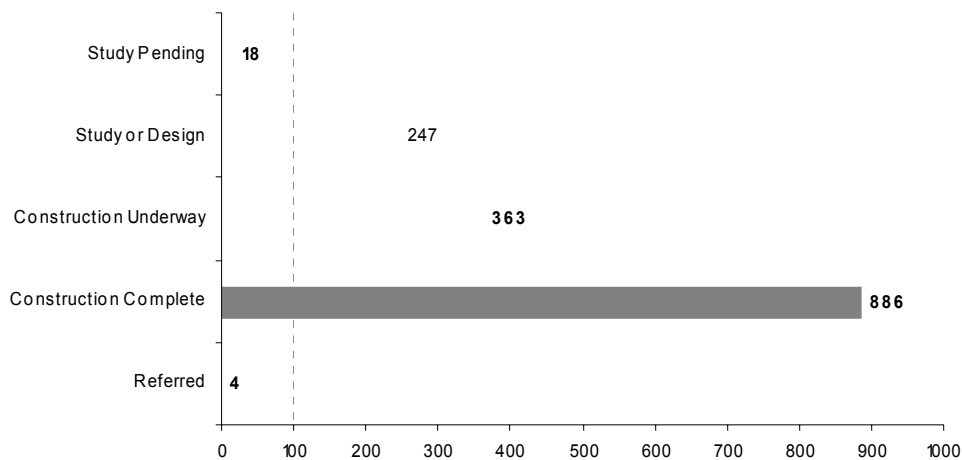


Figure II-2: Pipeline Status of 1,518 Final and Deleted Sites on the NPL

Throughout the Superfund process, cleanup costs are paid for either by the Superfund Program or by potentially responsible parties (PRPs). Orphan sites are sites where EPA is unable to identify a financially viable responsible party. At these sites, all cleanup costs are initially borne by the Superfund Program, although in some cases costs may be recovered later from responsible parties. More typically, cleanup costs are shared between PRPs and the Superfund Program. Even at sites where cleanup costs are funded entirely by the PRPs, the Program generally incurs costs to oversee PRP work, which it then seeks to recover from responsible parties, if possible.^A

Current Composition of the NPL

After 23 years of Superfund implementation, EPA and its partners in state environmental agencies and Tribal governments have identified over 45,000 sites for assessment under

^A Subcommittee member Jane Gardner notes that approximately 70% of Superfund Program cleanups are PRP-funded.

Superfund. The vast majority (nearly 75%) have been determined not to require remedial action under the Program.

At the end of FY 2003, 1,572 sites were on the NPL.⁷ This total includes sites proposed for the NPL and sites deleted from the NPL that may have ongoing O&M activities related to remedial actions. The status of these sites is as follows:

- ➔ 54 sites (~3.5%) are proposed for listing, but listing is not yet finalized;
- ➔ 1,244 sites (~ 79%) are listed; and
- ➔ 274 sites (~17.5%) have been deleted.⁸

Over half of the sites listed as final on the NPL (716 of 1,244) were listed prior to 1986, and thus are considered pre-SARA (or teenager) sites.⁹ For the last decade of the Program, additions to the NPL have outpaced deletions and the NPL has continued to grow, with an average of 28 new sites added each year. Deletions have averaged 21 sites a year over the same time period.

Mega Sites

Sites on the NPL are categorized in several ways. One categorization distinguishes sites based on the expected costs of remediation. Large, complex, and costly sites have come to be referred to as “mega sites” —defined as sites where total cleanup costs (i.e., combined extramural, actual, and planned removal and remedial action costs) are expected to equal or exceed \$50 million incurred by either the Superfund Program or PRPs.¹⁰

Of the 1,518 final and deleted sites on the NPL at the end of FY 2003, EPA estimates that 142 nonfederal facilities are or are likely to become mega sites.¹¹ Ninety-three, or 65%¹² of these mega sites are pre-SARA sites.

While mega sites make up a relatively small percentage of the NPL (<10%), they have important impacts on the Superfund budget. Sixty mega sites are Fund-lead or have orphan shares that will require funds directly from the Superfund Program. The remaining sites are PRP-lead or “undetermined lead.”¹³ In a recent report to Congress, the Office of the Inspector General (OIG) noted that in FY 2003, funding needs for eight large, complex sites (out of a total of 94 sites receiving funding) accounted for approximately 50% of the money available that year for Fund-led remedial actions.¹⁴ EPA allocated \$224.4 million of FY 2003 appropriations for remedial action work.¹⁵ Eight sites received a total of nearly \$109 million;¹⁶ seven of these sites are classified as mega sites.

As shown in Figure II-3, mega sites are distributed across the country, with some in every region.

Federal Facilities

Another way that EPA categorizes sites on the NPL is as federal or nonfederal facilities. Federal facilities are sites owned and operated by federal agencies, such as the Departments of Defense, Energy, and the Interior. While federal facilities on the NPL fall under the regulatory structure of the Superfund law, cleanups at federal facilities are not usually funded by the Superfund Program, but by other mechanisms, such as direct appropriations to responsible agencies. Of the 1,572 proposed, final, or deleted NPL sites, 177 (6 proposed; 158 final; 13 deleted)¹⁷ are federal

facilities.¹⁸ They include, among other things, abandoned mines; nuclear, biological, chemical, and traditional weapons productions plants; military base industrial sites, such as aircraft and naval ship maintenance facilities; and federal landfills. The primary federal agencies responsible for the 177 federal facility NPL sites are the Department of Defense (80% of NPL federal facility sites) and the Department of Energy (12%).¹⁹

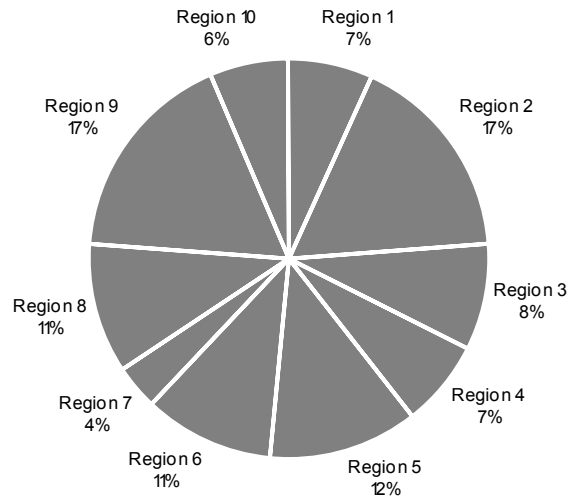


Figure II-3: Distribution of 142 Mega Sites by Region

Categorization by Type of Activity

Sites on the NPL are also categorized by types of industrial facilities or activities associated with the contamination, such as manufacturing, waste management, and recycling. A number of catch-all categories are also used, such as “multiple,” which refers to sites where more than one activity caused the site to be listed, and “other,” which includes groundwater and contaminated sediment sites with no identifiable source, military/ordnance production, dry cleaners, transportation, retail, and storage sites. As shown in Figure II-4, of all 1,572 sites on the NPL, including proposed sites, more than two-thirds fall into the manufacturing and waste management categories.²⁰

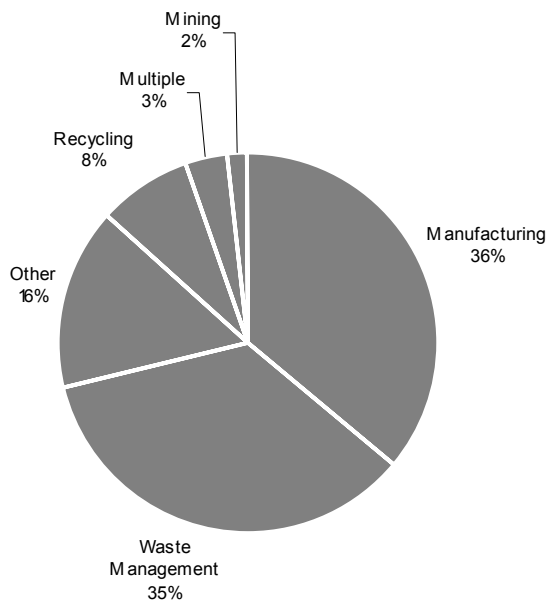


Figure II-4: All NPL Activity Type (Proposed, Final, Deleted)

Figure II-5 shows the distribution of mega sites across site type classifications, including subtypes within the manufacturing category. It also includes two other types of sites: groundwater plume sites with no identifiable source and contaminated sediment sites with no identifiable source (captured under “Other” in Figure II-4). The type of industrial facility or prior site activity does not significantly differ for mega sites when compared to site types for all NPL sites. In any given category, mega sites represent a relatively small percentage of the total sites on the NPL. Similar to the NPL as a whole, the categories of waste management and manufacturing represent the largest percentage of mega sites, with the subtypes for manufacturing comprising 35%.²¹

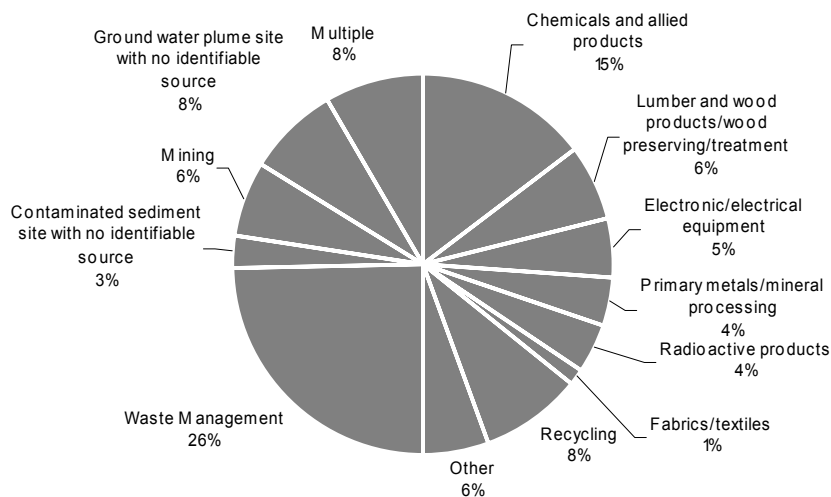


Figure II-5: Activity Type (and Manufacturing Subtype) for 142 NPL Mega Sites

Mining and Sediments

In its charge to the Subcommittee, EPA noted that mining and sediment sites warrant particular consideration. Because mining sites pose special challenges to the Superfund Program, EPA has established the Abandoned Mine Lands Team (AMLT) to provide a consistent framework for addressing both active and abandoned hard-rock mining sites. While the AMLT is a work in progress, its preliminary strategy aims to reduce environmental liabilities through both regulatory and nonregulatory activities at active mines sites and to consider various remediation options at abandoned mine sites on and outside of the NPL.

The AMLT is in the process of finalizing and distributing for internal review a web site and reference notebook specific to contamination problems on abandoned mine lands. Both are intended to help clarify the policy and technical issues related to abandoned mines. The Subcommittee did not review either the web site or the reference notebook.

Many Superfund cleanups address contaminated sediments as one component of cleanup. To ensure scientifically sound and nationally consistent decisions related to contaminated sediments sites being considered for CERCLA actions, in 2002 EPA issued eleven principles for managing risks from contaminated sediments²² and draft technical and policy guidance²³ related to the eleven principles. The guidance established a new headquarters consultation process for all CERCLA and federal-led RCRA sites where a significant sediment cleanup is expected. In general, these risk management principles are designed to support site-specific, risk-based remedial action decisions using an iterative process that encourages early and meaningful involvement of affected stakeholders. The Subcommittee did not review the management principles.

The consultation process is a two-tiered procedure, where Tier 1 sites are those for which the sediment action will address more than 10,000 cubic yards or more than five acres of contaminated sediment, and Tier 2 sites are very large, controversial, or complex sediment sites. Tier 2 sites are overseen by the Contaminated Sediments Technical Advisory Group (CSTAG), which is composed of staff from each of the ten EPA regions plus five headquarters staff. CSTAG assists site managers in selecting appropriate remedies and managing the cleanup process in accordance with the eleven risk management principles.

Currently, EPA has identified seven NPL sites that warrant CSTAG review.²⁴ Of these seven sites, three are mega sites, and one has been proposed to the NPL but does not yet have a final listing.

Cost of Cleanup

Accurate estimates for cleanup costs are very difficult to obtain and predict for several reasons. One is that EPA only tracks costs once a remedy selection has been made, so as not to prejudice the remedy selection process. While EPA tracks costs it incurs for

pre-remedy selection work and removal actions, when estimating future cleanup costs, EPA relies on planned obligation data only for those remedies that have been selected. Another reason it is difficult to obtain costs is that EPA only has cleanup cost information for sites or portions of sites where cleanup is paid for using Superfund Program funds. PRPs are not obligated to disclose the amount they spend on cleanup.^B

In the FY 2000 appropriations conference report, Congress asked Resources for the Future (RFF) to conduct an independent study to estimate the cost to EPA of implementing the Superfund Program through FY 2009. Completed in 2001, *Superfund's Future: What Will it Cost* included estimates of future costs in six separate categories, as well as information on past Superfund Program expenditures. The authors included three estimates of future costs: a base case, and a high and low case. The report's base case estimated annual EPA expenditures to range from a low of \$1.3 billion in FY 2009 to a high of \$1.7 billion in FY 2003. The estimates suggest that needed EPA expenditures, under current law and policies, would be above \$1.4 billion in nine of the ten years covered in the report.²⁵ Under the high case scenario, estimates of EPA's funding needs equal or surpass \$1.6 billion for seven of the ten years.²⁶

Using available data from several years and making certain assumptions about the number of operable units,²⁷ the RFF analysis concluded that the average cost per site for cleanup was \$12 million for non-mega sites and \$140 million for mega sites. A relatively small number of sites, even if not mega sites, that require large infusions of remedial action dollars in any given year can skew these average costs and can significantly strain the Superfund cleanup budget.

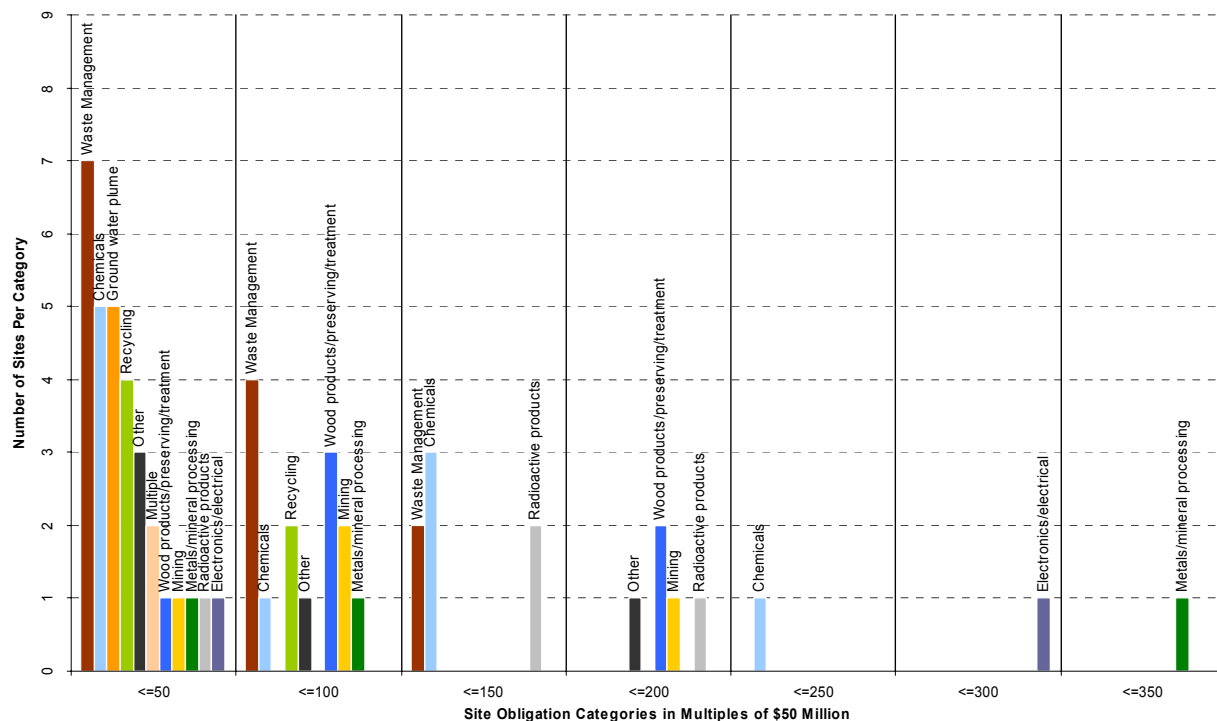
Because mega sites in particular can impact the overall Superfund Program remedial action budget, and because some mega sites are expected to cost into the hundreds of millions of dollars, the Subcommittee paid special attention to cleanup costs associated with mega sites on the NPL, especially the 60 sites at which cleanup activities are entirely or partly funded by the Superfund Program. Of particular interest to the Subcommittee was whether the type of industrial facility or prior site activity affected site cleanup costs. EPA provided data on actual and planned remedy construction obligations in increments of \$50 million for these 60 sites,²⁸ along with site type activity, which is displayed in Figure II-6.

At roughly half (31) of the sites, EPA's actual and planned remedy construction obligations fall under the \$50 million threshold for mega sites. (These are most likely all mixed-funding sites, where both EPA and PRPs are paying cleanup costs.) The remaining 29 sites have costs estimated at between \$50 million and \$350 million. The most expensive site displayed has been on the NPL since 1983 and has received to date \$165 million of Trust Fund money and EPA plans to obligate another \$150 million in the

^B Subcommittee member Jane Gardner notes that a group of several companies that comprise the Superfund Settlement Project collectively estimate their expenditures for hazardous site cleanup over the last twenty years at more than \$6 billion, as noted in a January 22, 2004 hand delivered letter to Ms. Elizabeth Craig, Deputy Assistant Administrator for EPA's Office of Air & Radiation.

future. This does not include the dollars provided by PRPs or work conducted by PRPs at this site, which also have been substantial. Some of the \$315 million actual or planned obligations for this site ultimately may be cost-recovered. EPA does not have construction obligation data for the remaining 82 mega sites on the NPL because these sites are PRP-led cleanups and responsible parties do not report cleanup cost information to EPA, or because not all anticipated construction projects have yet begun at a site.

The distribution by type of activity shows manufacturing as the primary site type for sites where actual and planned costs are expected to exceed \$100 million (11 of 15 sites are manufacturing subtypes).²⁹



Planned/Actual Obligations include only resources (including appropriated funds and resources recovered from private parties) that EPA is, or will use, to construct remedies, but does not include costs incurred by private parties to conduct response work.

Figure II-6: Actual/Planned Construction Obligations for 60 Fund- and Mixed-Lead Non-Federal NPL Mega Sites

Superfund Budget

Appropriations

Money appropriated to the Superfund Program from 1993 to 2004 has diminished. According to the July 2003 GAO report to Congress (and as updated on February 18, 2004) on the financial status of the Superfund Program, the Program's total annual

appropriations (in nominal dollars) has decreased from a high of approximately \$1.6 billion in FY 1993 to \$1.25 billion in recent years.³⁰ If adjusted for inflation using 2003 dollars, this would represent a decrease from \$1.9 billion to approximately \$1.25 billion. This decrease primarily represents a \$100 million reduction to the EPA Superfund appropriation beginning in FY 2000, a government-wide rescission of 0.22 percent in FY 2001 and an additional 0.65 percent government-wide rescission in FY 2003, and Congressional decisions to separately appropriate resources to other agencies and programs that were formerly included in the Superfund Program budget, including the Agency for Toxic Substances and Disease Registry (ATSDR), the National Institute of Environmental Health Sciences (NIEHS), and the Brownfields program. Since FY 2001, Congress has separately appropriated resources to ATSDR and NIEHS; beginning in FY 2003, Brownfields has been a separate appropriation.³¹

The total annual appropriation (including congressional earmarks) to the Superfund Program from 1993 to 2004 is shown in Figure II-7, along with the relative percentage of the source of the appropriation, which is either Trust Fund³² or general revenues.³³ Originally, the Superfund Trust Fund was funded through excise taxes on crude oil and some petroleum products, the sale of certain chemicals regularly found at toxic waste sites, and after passage of the SARA amendments in 1986, an environmental fee on profits in excess of \$2 million for some large corporations. While Congress allowed these taxes to lapse at the end of 1995, the amount of money appropriated to the Superfund Program has fluctuated over the past ten years. The Program, however, has been increasingly funded with general revenues. In FY 2004, as noted in Figure II-7, the appropriation from general revenues was the only source of funds for the Program.

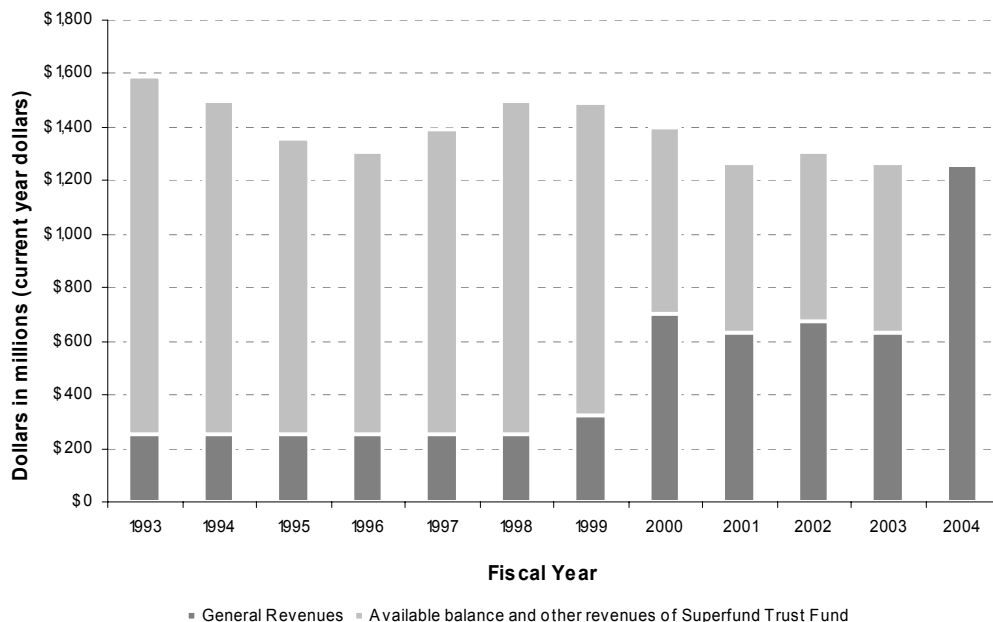


Figure II-7: Total Appropriations to the Superfund Program, 1993–2004

Expenditures

Funds allocated to the Superfund Program are used for specific types of expenditures, which can be broadly divided into programmatic and administrative categories. Administrative costs include staff payroll costs, facilities, equipment, supplies, and non-site travel. The majority of enforcement costs are included as administrative because enforcement resources primarily consist of payroll. Programmatic costs are generally external to the Agency (e.g., contracts, grants), and within the Superfund cleanup program include site-specific cleanup activities, site assessment and NPL listing work, investigations and remedy design, state and community participation, and program management and policy development.

Expenditures, as opposed to appropriations, represent the programmatic and administrative resources EPA has actually paid out. Because Superfund projects are often multi-year endeavors, resources appropriated in a given year may be paid out over multiple years. Additionally, because unused resources from prior years are returned to the Superfund budget in the form of deobligations, expenditures for any given year can exceed appropriations.

Remedial actions and related site-specific work, such as site investigations, remedy design, community involvement, post-construction monitoring, and oversight of responsible parties, represent the largest portion of the resources EPA spends in the Superfund Program—approximately 31%, or \$415.4 million, in FY 2002 (excluding ORD and OIG expenditures). In general, program management activities, such as policy development, emergency preparedness activities, contract and information management, training, and general support

have consumed the second largest share of the budget—approximately 22%, or \$294.8 million in FY 2002. Figure II-8, from GAO's 2002 report on the Superfund Program, illustrates EPA's Superfund Program expenditures in FY 2002 for everything except expenditures to ORD and OIG.³⁴

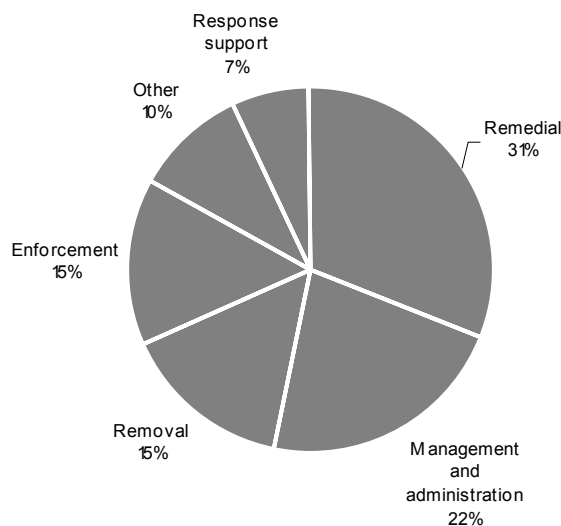


Figure II-8: Superfund Program Expenditures by Category (e.g., Removal, Remedial), FY 2002 (Excludes ORD and OIG)

As mentioned in the beginning of this chapter, the Superfund Program provides funding for various other offices that provide enforcement, management, and technology services to the Program. Figure II-9 shows the percent of Superfund expenditures for each of these offices for FY 2003.

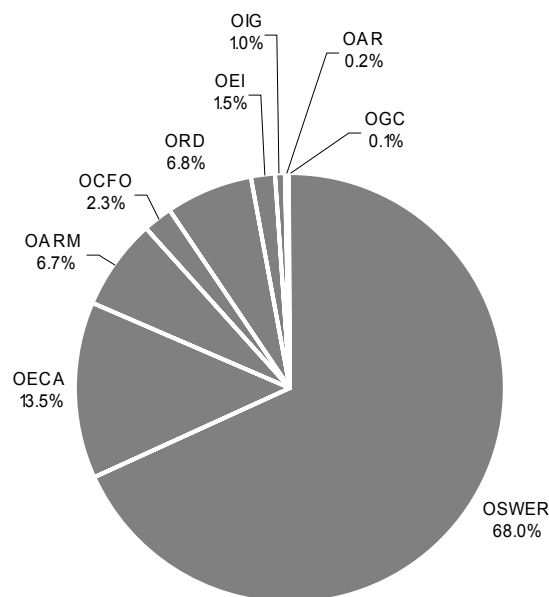
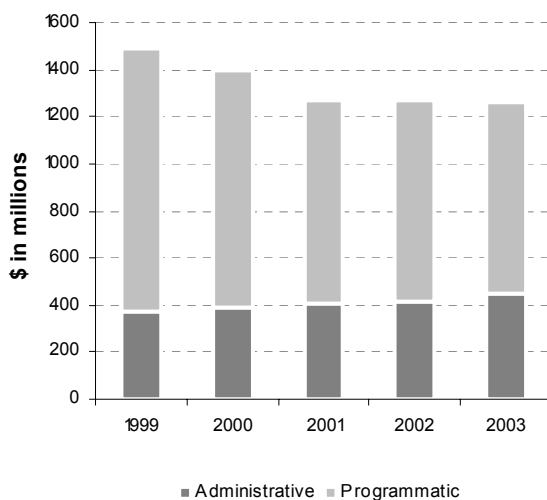


Figure II-9: Superfund Expenditures by Office, FY 2003
(Total \$1.265 Billion)



**Figure II-10: Superfund Expenditures—
Programmatic and Administrative,
FY 1999–2003**

Overall, the percent of the Superfund Program expenditures categorized as programmatic costs has declined somewhat in recent years, from nearly 75% of all expenditures (\$1.117 billion of a \$1.492 billion budget) in FY 1999 to roughly 65% in FY 2003 (\$818 million of a \$1.265 billion budget). Approximately 2% of this decline is attributed to shifting \$130 million for ATSDR and NIEHS from the Superfund appropriation to separate appropriations beginning in FY 2001. Figure II-10 indicates this decline over time.³⁵

According to EPA officials, a significant reason why administrative costs have increased over time relative to programmatic costs is that the Superfund budget generally is not increased yearly to account for cost-of-living salary adjustments (COLAs) and other salary increases for federal employees, or for multi-year inflation related to rent and utilities. EPA typically covers these increases in administrative costs by reducing the resources available for programmatic functions, rather than reducing staff resources.³⁶ Because the focus of the Superfund Program is on cleanup of sites contaminated with hazardous substances, the Subcommittee was concerned about this decline in the amount of money available to be spent on cleanup activities within the programmatic expenditures. Figure II-11 displays the total amount spent on removal actions, remedial actions, and long-term response actions, which tends to reflect payments made by EPA to cleanup contractors. It is based on data provided by EPA and shows a steady decrease from FY1997 to FY 2001.³⁷

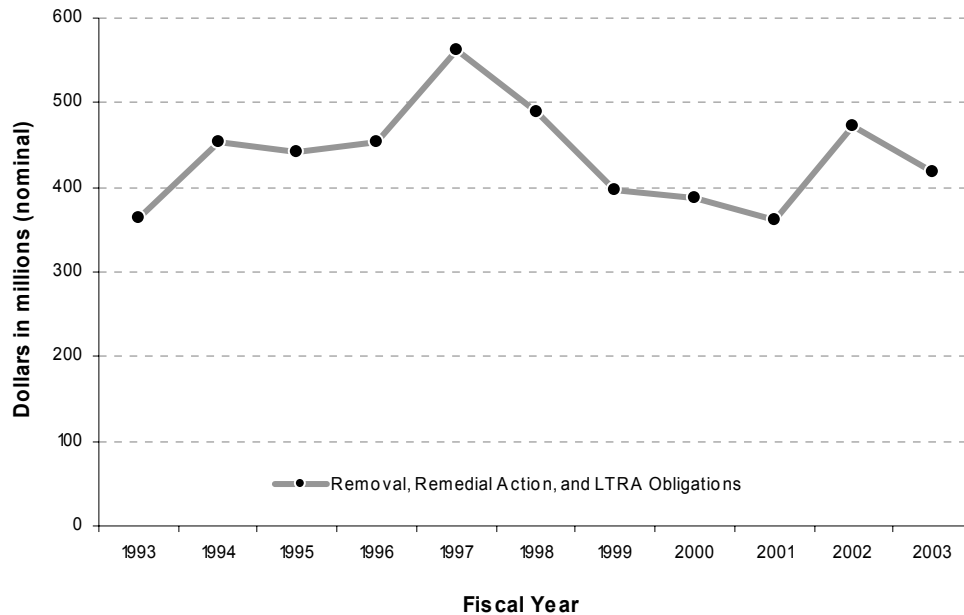


Figure II-11: Superfund Cleanup Expenditures (Removal, Remedial Action, Long-Term Response Action), FY 1993–2003

-
- ¹ Removal actions generally are limited to a 1-year effort and \$2 million in expenditures.
- ² 40 CFR 300.425(b)(1)
- ³ See Admin_Prog Historic SF Allocation Charts.pdf, sent by EPA on January 5, 2004.
- ⁴ Information provided by EPA from eFACTS on October 16, 2003.
- ⁵ U.S. EPA *Guidance on Setting Priorities for NPL Candidate Sites*, OSWER Directive 9203.1-06, 1992.
- ⁶ See 40 CFR §300.435(f)(3) and July 2003 EPA Directive OSWER 9355.0-81FS, *Transfer of Long-Term Response Action Projects to States*.
- ⁷ EPA tracks the status of sites on the NPL as proposed, final, or deleted. Analysis conducted as part of this report follows this practice for consistency. Generally, the report delineates which sites are considered in any particular tabulation.
- ⁸ Information provided by EPA from eFACTS on October 16, 2003.
- ⁹ Pre-SARA refers to sites listed prior to the enactment of Superfund Amendment and Reauthorization Act, October 16, 1986. Number of sites provided by EPA on November 25, 2003.
- ¹⁰ For CERCLIS reporting purposes, as presented in OSWER Directive 9200.3-14-1G-Q (April 7, 2003), sites are defined as mega sites if any combination of remedial action costs, excluding long-term remedial actions, exceeds \$50 million.
- ¹¹ Source: EPA list of 142 mega sites provided to Subcommittee on November 25, 2003; data current as of 10/15/03 from CERCLIS.
- ¹² Number of sites provided by EPA on November 25, 2003.
- ¹³ Sites are designated as “undetermined lead” when not all anticipated construction projects have yet begun.
- ¹⁴ See Office of the Inspector General, *Special Report: Congressional Request on Funding Needs for Non-Federal Superfund Sites*, Report 2004-P-00001, issued January 7, 2004, p.10.
- ¹⁵ Ibid., see p.6.
- ¹⁶ Ibid., Enclosure 3; New Bedford, p. 1; Nascolite Corp., p. 2; Combe Fill South Landfill, p. 2; Federal Creosote, p. 3; Welsbach & General Gas Mantle (Camden Radiation), p. 4; Coleman-Evans Wood Preserving Co., p. 8; Velsicol Chemical Corp. (Michigan), p.11; and Libby Asbestos Site, p. 19.
- ¹⁷ EPA’s Federal Facilities Restoration and Reuse Office: *Program Facts for Fiscal Year 2003*, data from CERCLIS on 10/14/2003, <http://www.epa.gov/swerffrr/documents/ffcc.htm>
- ¹⁸ Facilities owned or operated by a department, agency or instrumentality of the U.S.
- ¹⁹ See <http://www.epa.gov/swerffrr/documents/ffcc.htm>
- ²⁰ Source: Data provided by EPA from Superfund eFacts database, as of October 16, 2003.
- ²¹ Data provided by EPA on November 25, 2003; data as of end of FY 2003.
- ²² OSWER Directive 9285.6-08
- ²³ OSWER Directive 9355.0-85
- ²⁴ See http://www.ep.gov/superfund/resources/sediment/cstag_sites.htm
- ²⁵ Probst, Katherine N., et al, *Superfund’s Future: What Will It Cost?*, p. 158, Table 7-4. Washington, DC: Resources for the Future, 2001.
- ²⁶ All numbers are in 1999 dollars.
- ²⁷ Operable units are a distinct cleanup project at a site based on remedy, geography, or path of exposure. The RFF study assumed 3.8 operable units for mega sites; 1.6 for non-mega sites. See p. 87.
- ²⁸ Fund-lead or mixed-lead, nonfederal facilities, NPL mega site that have not achieved construction completion.
- ²⁹ Manufacturing subtypes include chemicals and allied products, lumber and wood products/wood preserving/ treatment, electronic/electrical equipment, primary metals/mineral processing, radioactive products, and fabrics/textiles.

³⁰ U.S. General Accounting Office, GAO-03-850, *Superfund Program: Current Status and Future Fiscal Challenges* (July 2003), p. 11; and February 18, 2004, letter to Senator Jeffords, *Superfund Program: Updated Appropriation and Expenditure Data*.

³¹ Data on the history of congressional appropriations for the Superfund Program 1999–2003 provided by EPA September 2003. In FY 1999, appropriations for ATSDR and NIEHS totaled \$136 million, while the Brownfields appropriation totaled \$90 million; in FY 2000, ATSDR and NIEHS totaled \$130 million, while Brownfields totaled \$88 million. For both FY 2001 and FY 2003, appropriations for Brownfields were \$93 million.

³² Revenue sources for the Trust Fund include taxes, cost recoveries, fine/penalties, and the interest on unexpended balance. Taxes provided the majority of resources through FY 1996.

³³ GAO-03-850 Report to Congress: *Superfund Program – Current Status and Future Fiscal Challenges*, July 2003, pp. 9-11; and GAO-04-475R: *Superfund Program: Updated Appropriations and Expenditure Data*, p.3.

³⁴ Data provided to GAO by EPA, which also determined which activities to include in each category. See GAO, *Superfund Program Current Status and Future Fiscal Challenges* (July 2003), p. 13. Total program expenditures for FY 2002 were \$1.34 billion. *Remedial* costs include investigations, remedy design, community involvement, construction, post-construction, and oversight of responsible parties. *Removal* costs include assessments, investigations, removal construction, and oversight. *Response support* includes site-specific costs related to technical assistance, technology innovation, contract management, records management, and general support to other organizations through grants, interagency and/or cooperative agreements. *Management and administration* includes non-site specific costs such as program management and budget, policy development and implementation, emergency preparedness activity, contract and information management, training, and general support. *Enforcement* costs include searching for and negotiating agreements with responsible parties. *Other* includes site assessment, federal facilities, and Brownfields, which is no longer funded through a Superfund appropriation as of FY 2003.

³⁵ Adm_Prog Historic SF Allocation Charts.pdf, sent by EPA on January 5, 2004.

³⁶ Ibid.

³⁷ See Obs_Exp 02.xls, provided by EPA to the Subcommittee during the November 5, 2003 meeting.



Listing and Management of Sites on the NPL

In Section 105(a)(8)(B) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), Congress requires the President to “list...national priorities among the known releases or threatened releases throughout the United States....” This list has come to be known as the National Priorities List, or the NPL. It is further defined by regulation at 40 CFR 300.5 as “the list, compiled by EPA pursuant to CERCLA Section 105, of uncontrolled hazardous substance releases in the United States that are priorities for long-term remedial evaluation and response.”

The NPL is one of the cornerstones of the Superfund Program. Decisions about the number and types of sites to list on the NPL have important implications for the Superfund budget and for affected communities and potentially responsible parties (PRPs). For instance, under 40 CFR 300.425(b)(1), only sites listed on the NPL are eligible for funding of long-term cleanups (i.e., remedial actions) from the Superfund Trust Fund. Under EPA’s current regulations, only communities near sites that are proposed for or listed on the NPL are eligible for technical assistance grants. Finally, Congress and other program overseers monitor progress at NPL sites to measure and evaluate the Superfund Program’s performance.

In September 2002, in response to questions from this Subcommittee, EPA headquarters informally surveyed EPA regional offices about the factors that most often prompt initiation of the Superfund site assessment process and inform eventual NPL listing. Based on responses from seven regional offices, it appears that the vast majority of sites considered for the NPL come to EPA’s attention based on recommendations from state governments or Tribal Nations, or through collaboration between a regional office and a state or Tribe. State regulators, for the most part, are the primary discoverers of contaminated sites, and state programs tend to be the cleanup mechanism used for most contaminated sites. When these programs cannot adequately address a site, for example, because of a significant orphan share or the need for specialized expertise, Superfund and other alternatives are considered. The regions reported that the need for Superfund money to pay for cleanup was the reason for approximately one-third of new NPL listings, another third resulted from lack of cooperation from PRPs, and the final third was due to a combination of other factors.

Because NPL sites remain the focus of the Superfund budget and because progress at NPL sites largely defines the success of the Program, EPA asked the Subcommittee to focus some of its deliberations on the role of the NPL, particularly as it relates to other cleanup programs.

This chapter describes the Subcommittee deliberations related to use and management of the NPL. The Subcommittee framed five questions under which it organized its discussion of this topic.

- ➔ How should EPA make the best NPL listing decisions?
- ➔ How should EPA increase the transparency of its listing decisions?
- ➔ What should be the role of other programs?
- ➔ How should EPA set priorities among listed sites?
- ➔ What are the options for increasing the resources available for cleanup?

The Subcommittee's deliberations and recommendations described in this chapter apply to all NPL sites, including mega sites. In addition, the Subcommittee anticipates that its deliberations and recommendations will be applied equally to sites addressed through the Superfund Alternative Sites program.

How Should EPA Make the Best Listing Decisions?

The Subcommittee approached the question “What types of sites belong on the NPL?” by examining the NPL listing process and asking “How should NPL listing decisions be made?” This approach was taken because the Subcommittee reasoned that if listing decisions are based on good information and analysis, the universe of sites identified will be improved. Subcommittee deliberations focused on improving the use of the NPL by optimizing EPA's current listing and management practices, rather than on redefining the Program.

Different Views on Risk

Subcommittee members had very different views about how the concept of risk should be addressed in the Superfund Program. Some members believe that the fundamental problem causing concern over the number and types of sites to list on the NPL is related to how the Agency uses risk in decision making. They believe the Program should primarily focus on sites or portions of sites that pose current significant threats to humans or sensitive environments, and should use Program remedial action resources where there are not viable responsible parties. Under this approach, the Program should first prioritize ongoing significant threats that require government funding for cleanup, and should use other environmental cleanup programs to address less significant current threats and potential future threats and to administer and oversee cleanups at sites that have viable responsible parties. These members believe that the Program's resources should be guided using assessments of risk, and that EPA should increasingly use risk

as a way to make decisions about NPL eligibility and to set priorities for spending. They stress that good site identification and outreach to communities and PRPs should yield the data to make solid decisions about the risks actually posed at sites and also are concerned that the Hazard Ranking System (HRS), the current method by which EPA most often determines whether a site is eligible for the NPL, does not rely heavily enough on assessments of current site risks.^A

Other Subcommittee members strongly disagreed with these views. These members believe the Superfund Program must address both current and potential future threats to both humans and the environment. They argue that due to the uncertainties inherent in risk assessment (e.g., multiple chemical exposures or sensitive subpopulations) and the uncertainty associated with exposures and physical and institutional controls, “current” and “potential future” threats, and “significant” and “insignificant” threats, often cannot be clearly distinguished. These Subcommittee members argue that waiting until actual exposure and adverse effects are experienced before acting would be inappropriate and more costly to the Superfund Program. Further, they believe that any diminution in EPA’s efforts to address both current and potential future threats to both humans and the environment would be inconsistent with the Agency’s statutory responsibilities under CERCLA, and they are concerned that EPA’s implementation of the Program may underestimate or inadequately address certain types of risks at certain sites.^B

This fundamental difference in views created the backdrop against which the Subcommittee carried out many of its deliberations.

In the context of these divergent views, the Subcommittee makes four consensus recommendations on NPL listing. Recommendation 1 calls on EPA to use a set of consistent factors to choose which NPL-eligible sites to propose for listing in each listing cycle. Discussion associated with Recommendation 1 describes Subcommittee members’ range of views on the set of factors that EPA should consider in listing decisions, and on the role that estimates of cleanups costs or the amount of money in the Superfund Program budget should play in decision making. Recommendations 2 and 3 call for EPA to continue and expand its practices of coordination, collaboration, and information gathering and sharing during the site screening and assessment processes. Recommendation 4 suggests some specific improvements to EPA’s implementation of the HRS and describes the Subcommittee members’ divergent views about whether EPA should undertake a more fundamental reevaluation of the HRS.

^A Subcommittee member Richard Stewart supports this view. See Attachment A for Mr. Stewart’s individual statement and elaboration on his position.

^B Subcommittee member Vicky Peters supports this view of risk. See Attachment A for Ms. Peters’ individual statement.



Recommendation 1: EPA should apply a set of consistent factors from year to year to choose which NPL-eligible sites to propose for listing in each listing cycle.

NPL eligibility is largely determined based on screening for threats and potential threats at a site. EPA¹ determines NPL candidacy (i.e., the subset of eligible sites the Agency decides to propose for the NPL)² by also taking into consideration factors related to program management, such as whether the site is being appropriately addressed by another program, or whether there is support in the affected community or the state or Tribal government for NPL listing. As described in Recommendation 1, the Subcommittee believes that EPA should make its decisions about which NPL-eligible sites to propose for NPL listing based on a consistent set of factors, and that factors used should be considered on a site-by-site basis.^C

The Subcommittee deliberated on factors that EPA might consider when determining which NPL-eligible sites to propose for listing on the NPL, but did not reach consensus on a specific set of factors to recommend.

Some Subcommittee members support the set of five factors described below, which are drawn largely from the factors that EPA already considers in determining which NPL-eligible sites to propose for listing.^D Because these factors are based on and incorporate the factors described in EPA's current guidance for setting priorities at NPL-candidate sites (OWSER Directive 9203.1-06) Subcommittee members who support their use anticipate that EPA could implement a process that considers these factors in a consistent manner without making major changes to the Agency's current procedures or incurring significant administrative costs.

Risk

- ➔ What are the risk drivers? Current EPA guidance on setting priorities for NPL-candidate sites (OSWER Directive 9203.1-06) lists seven sets of considerations that, although addressed in HRS scoring, should also be evaluated qualitatively

^C The support of Subcommittee members Gary King, Catherine Sharp and Vicky Peters for Recommendation 1 is qualified by their position that anticipated cleanup costs and the amount of funds available in the Superfund Program budget should not be criteria used to include or exclude sites from the NPL. See Appendix I for Mr. King's and Ms. Sharp's joint statement and the individual statement of Ms. Peters.

^D Subcommittee member Vicky Peters supports the set of listing factors based in part on her understanding that EPA's current policy does not factor in incremental reduction of risk from removals or PRP cleanup standards in determining whether a site should be listed on the NPL and that this practice is intended to ensure that sites that would qualify as a national priority are cleaned up in compliance with CERCLA standards, and do not fall off the table because just enough cleanup occurs to result in the site no longer scoring 28.5 on the HRS. See Attachment A for Ms. Peters' individual statement.

using best professional judgment for both scored and unscored HRS pathways. These considerations include whether a release has been observed, the types of exposures present, the types of threats and potential threats to humans and the environment present, and whether the Agency for Toxic Substances and Disease Registry (ATSDR) has issued or is planning to issue a health advisory.

- Are there risks not accurately reflected in the HRS score?

Likely Outcomes of Activities by Other Programs or PRPs

- Is or will another program appropriately address the site? The Agency should not use scarce Superfund time, attention, or funding when another program could appropriately address a site and has the capacity (funding and resources) to appropriately carry out site evaluation and cleanup or appropriately provide oversight of work funded by responsible parties.³ Such programs might include state or Tribal environmental programs, redevelopment programs^E, and other federal programs, such as the Resource Conservation and Recovery Act (RCRA) program.
- Are removal actions complete, underway, or scheduled? If so, will they significantly reduce risks to ensure long-term protection of human health and the environment?^F
- Have PRPs completed, undertaken, or scheduled response actions at the site? If so, are such actions likely to continue? Many state environmental cleanup programs have the authority to enter into enforceable agreements that can be used to ensure and oversee cleanup. In general, sites that are being appropriately addressed under such programs should not be considered candidates for the NPL.

Degree of Public Concern

- What is the degree of public concern? One of the reasons that the NPL is the most appropriate approach for some sites is that using Superfund may be the only practical way to respond to the high degree of public concern in some communities. In evaluating this issue, EPA should consider the extent to which a

^E Subcommittee member Vicky Peters supports the set of listing factors with the qualification that that NPL candidate sites should not be “deferred” to redevelopment programs because, although NPL candidate sites should take advantage of resources and partnerships for cleanup from other programs “redevelopment programs” do not provide the oversight, expertise, cleanup standards and other requirements of a cleanup program. See Attachment A for Ms. Peters’ individual statement.

^F Subcommittee member Vicky Peters supports the set of listing factors based in part on her understanding that EPA’s current policy does not factor in incremental reduction of risk from removals or PRP cleanup standards in determining whether a site should be listed on the NPL and that this practice is intended to ensure that sites that would qualify as a national priority are cleaned up in compliance with CERCLA standards, and do not fall off the table because just enough cleanup occurs to result in the site no longer scoring 28.5. See Attachment A for Ms. Peters’ individual statement.

community has been informed about a site and involved in site screening and assessment.

Support for Listing from State and Local Governments, Tribal Nations and Communities

- ➔ What is the degree of support for listing from state or Tribal governments? EPA has a policy of seeking state Governors' and Tribal governments' concurrences on all new NPL listings, and has a procedure in place to attempt to resolve issues when states or Tribal Nations are concerned about a listing. Although the Subcommittee could not reach consensus on whether Governors' and Tribal governments' concurrences should be required for listing, members did agree that the views of states and local governments and Tribal Nations should be considered during the listing process.

Environmental Justice

- ➔ Are environmental justice concerns associated with the site?

Other Subcommittee members do not support this set of factors or have concerns with one or more of the individual factors. These members have a variety of concerns with the factors, including (1) concern that the factors did not adequately call for EPA to consider actual, current threats to humans and the environment in listing decisions, and (2) concern that the factors allowed too much consideration of, and potentially reliance on, non-Superfund programs, particularly redevelopment programs.

Cleanup Costs v. National Priorities

Many Subcommittee discussions about NPL listing focused on the role (if any) that cost should play in EPA's decisions about which NPL-eligible sites to propose for listing. The Subcommittee did not reach consensus on this issue.

Some Subcommittee members believe strongly that EPA should not use estimates of cleanup costs or the amount of money available in the Superfund Program budget to make decisions to include or exclude sites on the NPL. While these members acknowledged that decision makers may have an awareness of costs and knowledge of likely program funding, they believe that this knowledge should not be used to limit or expand the number or types of sites listed on the NPL. Rather, they believe that the NPL should represent true national priorities—sites that meet the eligibility criteria and are judged by EPA to need the expertise and resources that only the Superfund Program can provide.

Subcommittee members who argued that budget and cost estimates should not be used to make decision to include or exclude sites from the NPL acknowledged that one of the implications of this approach is that the NPL may grow faster in the near term, putting additional pressure on EPA to do more with the resources it has. They also

acknowledged that there may continue to be sites on the NPL at which EPA is unable to move cleanups forward, and remedies may be delayed because of limits on funding. However, these Subcommittee members feel strongly that the NPL should reflect the true need for funding—not be limited to the sites the Agency thinks it can afford.

Other Subcommittee members did not support a recommendation calling for EPA to disregard estimates of cleanup costs or the amount of money available in the Superfund Program budget when making NPL listing decisions. Subcommittee members who held this view discussed a number of reasons. Some Subcommittee members were willing to support a recommendation against consideration of costs in individual listing packages if the Subcommittee was able to reach consensus on the role that costs and funding should play in shaping the Program over the longer term; however, the Subcommittee did not reach consensus on this point. Other members were uncomfortable supporting such a strong statement against consideration of costs in the absence of what they viewed as related recommendations on improvements they think are needed in the NPL listing process and management of sites on the NPL. They noted that improvements are particularly needed in the areas of consideration of non-Superfund programs, setting priorities among sites listed on the NPL, EPA's allocation of Superfund resources, and how large geographic areas are addressed. The Subcommittee discussed each of these issues, as described later in this Report.

Matching the Size of the Program to Funding Over Time

Some Subcommittee members believe that, over time, EPA management is responsible for matching the size of the Superfund Program with the funds appropriated by Congress. These members believe that because of this responsibility, the timing and numbers of sites listed should, over time, be legitimately shaped by EPA to manage the Program to an overall size that corresponds to Congressional appropriations. They also believe that, over the long term, EPA management has no choice but either to match the Program's dimensions to the resources provided by Congress or to successfully seek greater resources from Congress. These members stressed that EPA's greatest responsibility should be to achieve timely cleanup at the priority sites it places on the NPL, rather than the creation of an expansive site list.^G

Other Subcommittee members did not support this position, believing instead that EPA should place sites on the NPL based solely on consideration of a set of consistent factors and that anticipated cleanup costs and the amount of money in the Superfund Program budget should never be criteria used to include or exclude sites from the NPL. They contend that EPA has a responsibility to communicate to the executive and legislative branches of government, as well as to the public, the most accurate information about the existence of national priority sites and their funding needs. These members are concerned that if EPA chooses not to list sites on the NPL in an effort to match the size of the Program to the funding available, the Agency will deny and obfuscate the true need

^G Subcommittee member Richard Stewart supports this view. See Attachment A for Mr. Stewart's individual statement.

for funding, thus reducing the likelihood that adequate funding will be requested or appropriated.



Recommendation 2: EPA regional offices should continue and improve collaboration with states, local governments, and Tribal nations as they consider which sites to recommend to EPA headquarters for NPL listing.

Of the hundreds of thousands of contaminated sites across the United States, only a small fraction may rise to the level of a national priority needing Superfund Program attention. EPA routinely collaborates with state officials in identifying sites for consideration for the NPL and in the pre-screening and Superfund site assessment processes that lead to a decision to propose a site for NPL listing. EPA also coordinates and collaborates with Tribal and local governments in these processes. However, based on the knowledge and experiences of some Subcommittee members, coordination and collaboration with local governments and Tribal Nations appears to be more ad hoc than EPA's interaction with state environmental agencies.

Collaboration and coordination among Tribal nations, states, local governments, and EPA regional offices are critical to sorting through the many contaminated sites that may need attention, and ensuring that resources for site assessment and eventual cleanup are oriented toward the sites that truly require national attention under the Superfund Program. Recommendation 2 is intended to ratify the importance of collaboration and coordination efforts and relationships, and to encourage EPA to strengthen them where possible.

As EPA implements Recommendation 2, the Subcommittee cautions against the Agency's spending significant resources to develop extensive guidance on coordination.^H In general, individual EPA regional offices have developed practices of coordination that they believe are appropriate to their region- and state-specific circumstances. These practices include Regional Decision Teams, site "watch lists," and other strategies. From their individual experiences, Subcommittee members had a range of views about existing regional coordination mechanisms. Some members think that existing mechanisms are working well and do not need significant improvement; other Subcommittee members think that coordination is not consistently or reliably achieved.

Within this range of views the Subcommittee agrees that informal region- and state-specific approaches can be appropriate, so long as coordination is consistently achieved and national-level guidance is applied. If EPA believes that existing coordination

^H Subcommittee member Mel Skaggs addresses his concerns about the potential cumulative budgetary impact of the many new processes, surveys, committees, and studies discussed throughout this report in his individual statement. See Attachment A for Mr. Skaggs' individual statement.

activities in the regional offices need strengthening, it might consider a few discrete, time- and resource-limited tasks to further Recommendation 2. These might include:

- ➔ Evaluating of regional coordination activities to document best practices and ensure that all regions have coordination practices in place, and
- ➔ Issuing of a brief guidance on coordination to the regions to promote a reasonable degree of national consistency and ensure an adequate level of consultation with states and local governments, Tribal Nations, and other federal agencies.

The National-Level Review Process

In 2002, EPA instituted a new national-level review process in which officials from the regional offices and headquarters evaluate all NPL-candidate sites and group them in tiers. Tier groupings are based largely on the relative significance and urgency of risk but also taking into consideration other program management factors, including budgetary constraints. When sites are tiered, the national-level review group makes recommendations to the Assistant Administrator for Solid Waste and Emergency Response about which NPL-candidate sites should be proposed for NPL listing.

Prior to this change, EPA headquarters generally provided guidance and oversight to the regions on national listing policy and ensured that listing packages were appropriate and legally defensible. Most NPL-candidate sites recommended by regional offices were proposed for listing on the NPL, provided national policy was followed and the HRS score was valid. Since the advent of this new national-level review process, approximately half of the NPL-candidate sites sent forward by regional offices to headquarters have been proposed for NPL listing. The remaining NPL candidates sent forward by the regions have been held over for reconsideration in future listing cycles.

The Subcommittee had a range of views about this national-level review process. Some Subcommittee members were very supportive of a national-level review, seeing it as a necessary step toward EPA's ensuring quality listing decisions, and an important factor in providing the Assistant Administrator for Solid Waste and Emergency Response the information and perspective needed to fulfill the delegated responsibility to make listing decisions.¹

Other Subcommittee members viewed a national-level review as an unnecessary step, further removing decision making from the state and regional managers who are most familiar with site-specific circumstances and, therefore, best equipped to make recommendations about which sites constitute a national priority. These members believe that EPA's previous practice was appropriate, i.e., using a national-level review to

¹ Subcommittee member Richard Stewart supports this view. See Attachment A for Mr. Stewart's individual statement.

ensure national listing policy was applied and HRS packages represented sound professional judgment and could withstand legal challenge.^{JK}

Within these differences, Subcommittee members agreed that the national-level review process (if it is continued) should focus on:

- ➔ Bringing national consistency and a national perspective and judgment to bear on NPL listing proposals,^L
- ➔ Monitoring regional offices' implementation of Program guidance,
- ➔ Considering geographic fairness in NPL listings so that one region of the country does not inappropriately dominate the NPL, and
- ➔ Ensuring that HRS packages are legally defensible and of high quality.



Recommendation 3: EPA should reach out to potentially affected communities, local governments, and potentially responsible parties earlier in the Superfund site assessment process to share and solicit information about sites being considered for NPL listing.

Currently, potentially affected communities, local governments, and PRPs (if known) are involved in the Superfund site assessment⁴ process only on an ad hoc basis, if at all. Expanding outreach practices to involve more individuals and entities earlier in the process should foster information sharing about sites under consideration and give communities, local governments, and PRPs more opportunities to participate in the site screening and assessment processes. Earlier involvement and information sharing are important for a number of reasons:

- ➔ Community leaders, site neighbors, local officials, previous site workers, PRPs and community and public interest groups can be sources of historical information and knowledge concerning site activities, contamination, and exposure pathways. While this information may come forward eventually, particularly for sites that move through the screening and assessment process to

^J Subcommittee member Jim Derouin feels that EPA Headquarters must make final listing decisions because it is responsible for and, therefore, must be held accountable for, overall management of the Program; and feels that Program management would suffer if this duty were delegated to the regions and/or states and listing decisions were to be made without any regard to cost. See Attachment A for Mr. Derouin's individual statement.

^K Subcommittee member Vicky Peters supports the view that a national level review is an unnecessary step. See Attachment A for Ms. Peters' individual statement.

^L Subcommittee member Vicky Peters does not support this role. See Attachment A for Ms. Peters' individual statement.

an NPL listing, bringing it forward earlier may help EPA make better screening, assessment, and listing decisions.

- ➔ Earlier involvement may prompt PRPs to undertake and fund some or all investigation or clean up activities without an NPL listing, for example, under the auspices of a state environmental cleanup program if appropriate, thereby reducing or delaying the number of sites at which Superfund resources are needed. This may be the case particularly where PRPs who may be willing to undertake or fund site investigations under a non-Superfund program do not own the site under consideration. Under EPA's current process, these PRPs often do not become involved until after a site is placed on the NPL and the opportunity to proceed under another program is lost.
- ➔ Earlier involvement may serve to identify site-specific data that are available and reliable and that can be used during HRS scoring, as described more fully in Recommendation 4.
- ➔ As part of reaching out to stakeholders, particularly state, local and Tribal governments, EPA can gather information on and make connections with non-Superfund programs that may have independent missions or activities that could positively or negatively affect clean up of a site. This information could be used to capitalize on potential positive effects and avoid negative effects. (Note that, the Subcommittee had a range of views about the role of non-Superfund cleanup program; this range of views is described further later in this chapter.)
- ➔ Earlier involvement may help EPA identify potential redevelopment opportunities that could provide additional focus and funding for the cleanup if they were pursued and integrated into clean-up activities early in the process. (Note that, the Subcommittee had a range of views about the role of non-Superfund programs. Some Subcommittee members were particularly concerned that redevelopment programs are not cleanup programs and have distinct and potentially incompatible missions. This range of views is described further later in this chapter.)

In addition, as discussed in Chapter IV, some Subcommittee members believe that EPA should consider a range of options and evaluate a specific set of factors when making decisions about a large, geographic area where multiple, unrelated contaminant sources are present. These options include addressing the area as one "site" or as smaller units more closely tied to individual releases of hazardous substance. These members note that earlier involvement of stakeholders could help the Agency determine which releases are truly national priorities, and whether releases are inextricably intertwined or whether cleanup would be expedited or made more efficient if discrete releases were addressed separately as multiple cleanups under the NPL, under other appropriate programs, or a combination of these approaches.^{M N} (Note that the Subcommittee had a range of views

^M Subcommittee member Tom Newlon notes his support for early stakeholder involvement as part of a package of reforms, some of which did not make it into the final report as recommendations, that are needed to more effectively and efficiently address potential mega sites, particularly those encompassing a large geographic area. See Attachment A for Mr. Newlon's individual statement.

on this issue, and some members did not support EPA's considering the possibility of listing only portions of a large geographic area. This range of views is discussed further in Chapter IV.)

■ Procedures and Timing for Early Involvement and Outreach

The Subcommittee is not recommending a specific procedure that EPA should use to reach out to local governments, PRPs, or communities. EPA should use targeted efforts and informal mechanisms where effective, should take care to contact representatives of disparate interests, and should ensure that participants have enough information about a site under consideration to participate in a meaningfully.

The Subcommittee also is not recommending that outreach start at a specific point in the site screening or assessment process. Involvement should begin as early as practicable, considering site-specific circumstances. To facilitate earlier identification and involvement of PRPs, the Agency should increase emphasis on guidance that encourages PRP searches as early as practicable after a site is identified to be of interest, instead of after site listing.⁵

The Subcommittee emphasizes that it is not recommending diversion of Superfund resources to extensive outreach and involvement activities at every new site entered into the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) data base. (In 2003, EPA entered more than 240 new sites into CERCLIS.)⁶ Rather, EPA should focus its efforts on the subset of sites that likely will be found to be eligible for NPL listing.



Recommendation 4: EPA should work with stakeholders to review the application of the Hazard Ranking System model to ensure that it (1) accurately characterizes threats at sites located in sparsely populated areas and appropriately considers environmental justice concerns, traditional lifestyles, and other issues; and (2) uses site-specific data that EPA determines are available and reliable, rather than defaulting to presumptions in the HRS to estimate exposures.

The Subcommittee did not carry out a detailed assessment of how the HRS currently is functioning, and is not making recommendations related to the 28.5 HRS scoring cut off

^N Subcommittee member Jim Derouin believes that EPA should have the flexibility to evaluate risks/exposures presented by portions of mega sites rather than being bound to assume that, once a mega site is listed, all portions of such a site must be treated as posing an equal risk. He feels that, without such flexibility, EPA cannot efficiently direct funding to the sites, or portions of sites, that pose the most risk at any given point in time. See Attachment A for Mr. Derouin's individual statement.

or the HRS model generally. At the same time, because the HRS is the means by which EPA most often defines which sites are eligible for NPL listing, the Subcommittee discussed the HRS during its deliberations on the NPL listing process and is providing a number of suggestions for improvements to EPA's implementation of the HRS.

The HRS serves a specific and limited function in the Superfund Program. It is a screening tool that assigns certain numerical values to a variety of exposure characteristics known or assumed to be associated with a site. It is intended to be conservative, and while Subcommittee members had a range of views as to whether the HRS was too conservative or not conservative enough, all recognized that it delineates a set of sites for EPA to consider for the NPL and is not a risk assessment.

Once an evaluation of one or more of the critical exposure pathways at a site results in an HRS score of 28.5 or higher, a site becomes eligible for the NPL. EPA generally does not invest additional resources in completing calculations for all pathways to determine how high the site score would be if all pathways were considered. Because of this practice, HRS scores cannot be used to compare the relative degree of risk among NPL sites, and cannot be relied upon to make judgments about the total risk posed by an individual site. As described further later in this section, Subcommittee members had a range of views about the fact that the HRS cannot be used to make risk comparisons or judgments.

Once sites are determined to be eligible for listing, they are not automatically listed. Indeed, many sites that score 28.5 or higher are not listed. Rather, these eligible sites are further screened by EPA and only a subset is proposed for the NPL. Because EPA routinely exercises its discretion not to list NPL-eligible sites, an inappropriate or less than perfect application of the scoring system can be corrected during EPA's exercise of discretion relative to listing decisions. Subcommittee members who generally are comfortable with the use of the HRS as a screening tool, rather than a risk assessment tool, noted that if application of the HRS either over- or underestimates threats at a site, earlier involvement of affected communities and PRPs (Recommendation 3) most likely will improve HRS scoring and interpretation by bringing more information to the table earlier in the site screening and assessment processes. (If a site does not score 28.5 or higher, EPA generally does not consider it for NPL listing.)

Subcommittee members identified a number of concerns related to implementation of the HRS. Some Subcommittee members expressed concern that limitations of the HRS as implemented may preclude NPL listing of sites that pose legitimate and serious risks to humans and the environment and that warrant national attention under Superfund. Other members had concerns about the opposite problem, that application of the HRS may result in the listing of sites that do not truly pose the types of legitimate, significant risks to humans or the environment that the Superfund program was designed to address. Some of these Subcommittee members suggested that layers of conservatism built into the HRS model result in unreasonably conservative listing decisions, while others believed

the HRS does not appropriately weight real and present threats to humans or the environment versus potential future exposures.^O

The Subcommittee suggests a number of specific improvements to EPA's implementation of the HRS. Subcommittee members who support greater use of risk assessment in decision making about NPL listings appreciate that the improvements to HRS implementation described below may help the HRS better function as a screening tool. Nevertheless, as described further later in this section, they also believe that a more basic evaluation of the role of risk in decision making about NPL eligibility is needed.^P

Sparsely Populated Areas and Environmental Justice Communities

While CERCLA requires that the prioritization process take into account to the extent possible the population at risk, it does not express an intention to protect dense populations to the exclusion or detriment of sparse populations. If EPA's initial investigation of this issue reveals that the HRS model is screening high-risk sites from further consideration for the NPL because they are located in sparsely populated areas, the Agency should initiate a dialogue, including the relevant stakeholders, to determine how to address the HRS bias towards heavily populated areas.

Subcommittee members were also concerned that the HRS model may not adequately incorporate environmental justice considerations. Many believe that socio economically depressed areas and communities of color are often subjected to a greater proportion of environmental insult as a result of ongoing and abandoned releases of hazardous substances, and fewer redevelopment opportunities. As a result, a community could be exposed to a number of sites, none of which scores 28.5, but that together may pose greater risks to receptors than sites currently on the NPL. In addition, genetics, inferior nutrition, and poor health care may predispose people to disease and other adverse effects from contaminated sites. As a site-specific screening tool, the HRS does not incorporate such considerations; rather, it evaluates releases in isolation.

Although the Subcommittee acknowledges this issue, it did not have the opportunity to thoroughly evaluate the HRS components and arrive at a definitive proposed resolution. Therefore, the Subcommittee suggests that EPA formulate policies that would ensure that predisposition to disease as a result of genetics, poor nutrition, or health care, and cumulative exposures from a disproportionate number of contaminant sources, be considered in NPL listing decisions. In this effort the Agency should coordinate with the National Environmental Justice Advisory Committee, which is engaged in similar efforts. Additionally, EPA should consider convening a broad stakeholder task force (EPA/state/Tribal/industry/public) to make recommendations on scientifically supportable policies to address concerns about environmental justice issues related to NPL listing.

^O Subcommittee member Richard Stewart supports this view. See Attachment A for Mr. Stewart's individual statement.

^P Subcommittee member Richard Stewart supports this view. See Attachment A for Mr. Stewart's individual statement.

Traditional Lifestyles

EPA should consider creating a working forum with Tribal associations, including Alaskan Natives, Hawaiian Islanders, and Native American Indians, to develop reasonably anticipated exposure scenarios for these groups and to determine what regulatory actions are needed to ensure that such scenarios are incorporated into listing decisions. The Subcommittee was briefed on traditional lifestyles. As part of this briefing, Tribal members presented their experience that, at least in some cases, traditional and subsistence practices of Tribal members are not sufficiently addressed in any aspect of the Superfund Program – from NPL decisions, to risk assessment, to remedy selection and deletion. In addition, although traditional lifestyles tend to be associated with Tribal Nations, they also can be important in non-Tribal communities, particularly communities of color, where traditional religious practices are predicated on the use of the natural environment.

Vapor Intrusion

The Subcommittee supports EPA's current investigation of the prevalence and seriousness of vapor intrusion at sites currently listed on the NPL. In the meantime, EPA should work with the Association of State and Territorial Solid Waste Management Officials in its ongoing effort to determine whether vapor exposure pathways can be addressed adequately through application of the HRS. If it is determined that HRS screening is sufficient, EPA should disseminate its findings through training and/or new or revised guidance and policy directives. If it is determined that the HRS does not adequately reflect risks from vapor pathways, EPA should work with states, Tribal Nations, and other appropriate individuals to decide what steps to take to ensure that sites posing significant enough risks via vapor intrusion are eligible for listing on the NPL.

Explosive Hazards

EPA should determine, with input from relevant stakeholders, whether it currently has the option of placing explosive hazard sites on the NPL, and if not, whether such an option would expedite and improve the cleanup of such sites. Meanwhile, EPA should address imminent and substantial dangers to the public health or welfare posed by explosive hazards by taking removal actions where appropriate.⁷ Hazards resulting from exposure to unexploded and other ordnance pose threats not only at federal facilities, which are not specifically addressed in this report, but also at numerous formerly used Department of Defense sites and private party sites. These threats currently may not be adequately addressed by the HRS.

Use of Real, Site-Specific Data

EPA should supplement HRS scores calculated using the standard pathway models and default assumptions with additional consideration of actual, up-to-date site-specific data where such data are available and reliable. Use of site-specific data may help to clarify HRS default assumptions and underlying presumptions such as fish consumption rates,

and likely contaminant receptors.^Q Consideration of site-specific data, where practicable, should ensure that decisions based on HRS scores accurately reflect actual site conditions and risks.

Using the process of earlier involvement suggested in Recommendation 3, EPA should encourage affected communities, PRPs, and other stakeholders to provide available up-to-date, site-specific data that could be used to improve upon the HRS model's uniform incorporation of default assumptions and underlying presumptions by facilitating a more thorough understanding of actual site conditions, threats and potential threats. Besides improving the accuracy of screening and assessment of NPL-eligible sites, this enhanced use of site-specific data avoids EPA's having to modify the HRS model parameters (which are established in large part by regulation), because the data are considered during interpretation of HRS scores.

Other Concerns About the HRS

In addition to the concerns about implementation of the HRS described above, some Subcommittee members had a much more basic concern that because the HRS is not a risk assessment, but is rather a screening evaluation that considers both current and hypothetical potential future threats, it does not provide the type of risk characterization that EPA should use to make decisions about which sites to propose for listing on the NPL. These members believe that EPA should determine NPL eligibility by using a scoring system that evaluates the actual risks posed by sites to people and the environment, i.e., an approach akin to risk assessment. At a minimum, these Subcommittee members believe that EPA should undertake an open, public process to revise the HRS so that it is more risk based.^R These concerns are described in more detail earlier in this chapter in the discussion of Subcommittee members' different views about risk.

Other Subcommittee members strongly opposed this view. They believe that using the HRS as a screening tool to determine NPL eligibility is appropriate, and that the current HRS, particularly with the improvements suggested earlier in this section, will likely be successful in identifying sites that should be eligible for the NPL. These members believe that more intensive and expensive risk assessment should not be undertaken at each of the many contaminated sites that EPA may consider in each year but, rather, should be undertaken only after EPA has decided that a site should be proposed for NPL listing. Furthermore, these members observed that the cost and regulatory uncertainty that would accompany any sort of reconsideration of the basic HRS model most likely would be a significant drain on the Superfund budget and other EPA resources, thereby

^Q Subcommittee member Vicky Peters supports the use of site-specific data in the HRS with the caveat that she does not believe that exposure default assumptions generally lead to over-estimated risk and she therefore believes that listing should not be delayed in order to obtain such site specific data. See Attachment A for Ms. Peters' individual statement.

^R Subcommittee member Richard Stewart supports this view. See Attachment A for Mr. Stewart's individual statement.

potentially reducing the funding available for cleanups, and could impede EPA's and states' abilities to obtain cleanup commitments from PRPs.^{S T}

Cautionary Note to All NPL Listing Recommendations

The Subcommittee has chosen to address the question of "What sites belong on the NPL?" by recommending improvements to the current NPL listing process. However, this is not to suggest that EPA should delay listing a site that obviously will not be adequately addressed by a non-NPL program. EPA retains sole discretion to make decisions about which sites to list on the NPL. The recommendations made by the Subcommittee are not intended and should not be interpreted to limit that discretion. The Agency has a responsibility to make listing decisions and to get NPL sites cleaned up in a timely and efficient manner, in accordance with promulgated procedures and based on credible technical evidence.

In addition, the Subcommittee is not advocating that EPA redirect major resources from on-the-ground cleanup activities to these reforms, or develop significant new systems or guidance.^U Because these reforms represent improvements to existing procedures, the Subcommittee expects that the Agency can accomplish them using existing program administration resources.

How Should EPA Make Its Decisions about Screening, Assessing, and Listing Sites More Transparent?

The Subcommittee understands that EPA and its partners in state environmental agencies and local and Tribal governments must have the ability to exercise professional discretion and wisely use public resources in decisions about the number and types of sites to list on the NPL. However, they should not exercise this discretion in a vacuum. These groups have a responsibility to ensure that the implications of their decisions are understood by those who are most affected by them—namely, the communities around potential NPL sites, the parties who are responsible for cleanup, and the state, local, and Tribal environmental programs to which communities and PRPs most likely will turn when

^S Subcommittee member Jim Derouin feels that EPA Headquarters must make final listing decisions because it is responsible for and, therefore, must be held accountable for, overall management of the Program; and feels that Program management would suffer if this duty were delegated to the regions and/or states and listing decisions were to be made without any regard to cost. See Attachment A for Mr. Derouin's individual statement.

^T Subcommittee member Vicky Peters supports this (opposing) view of the HRS. See Attachment A for Ms. Peters' individual statement.

^U Subcommittee member Jim Derouin believes that one efficiency problem facing EPA is that it should direct, as a percentage of its budget, more funding to actual bricks and mortar remediation. See Attachment A for Mr. Derouin's individual statement.

a potential NPL site is not listed on the NPL. It is also important that such decisions and the logic for them are transparent to the public, Congress, and other Program stakeholders.

The Subcommittee recommendations on this issue are intended to bring a reasonable level of transparency to EPA's decision making, and at the same time respect the Agency's discretion. Recommendation 5 describes an annual reporting process. Recommendation 6 calls for EPA to be more consistent and informative in its communication of decisions to screen sites out of the Superfund process.



Recommendation 5: EPA should improve the information and data on the Superfund Program and publish an annual report that presents key data on the Program, including program progress and expenditures, anticipated costs, a summary of sites considered for listing, and the listing decisions and criteria applied.

The Subcommittee relied heavily on EPA to provide data and information about the numbers of sites being addressed by the Superfund Program, Program progress and remaining cleanup obligations, estimates of the potential future cost burden to the Program, and the numbers and types of NPL-eligible sites and NPL-candidate sites being considered by the Agency. While the Agency was forthcoming with some of this information, it was clear that often the information was produced with difficulty and at considerable staff effort. Often it was necessary for EPA officials to revise or correct information provided to the Subcommittee, to account for updated data or to correct errors in previous reporting.

The purpose of information collected by the Superfund Program should be to inform decisions and allow the Program to plan effectively by spotting trends before they become crises. The Subcommittee's impression is that EPA decision makers do not have key Program management information at their fingertips, and even where that information can be made available, it often must undergo extensive revisions for quality control before it can be used. This seems particularly true with respect to information about (1) the types of site conditions that are driving remedies at listed sites, (2) the significant impediments to progress at so called "teenager" or pre-SARA sites, (3) the numbers and types of potential future NPL sites, and (4) program expenditures and potential future costs. The Subcommittee encourages the Agency to increase its understanding of these four data sets and to improve the quantity and quality of real-time data available to EPA managers and to the public on these issues. This is particularly important for mega sites and potential mega sites, because of the potential of such sites to dramatically affect Program funding needs and priorities. (Recommendation 11 calls for increased management attention for mega sites.) Increased use of Internet or other web-based systems may be an efficient way to make real-time data more readily available.

In addition, EPA should communicate the data it does have more freely and openly. Recommendation 5 calls for an annual report on Superfund Program accomplishments and anticipated future costs. At a minimum, this report should include:

- ➔ A summary of program activities, progress at sites, and expenditures by fiscal year;
- ➔ The status of listed sites including a summary of remaining work to be done and projected future costs; and
- ➔ The NPL-candidate sites considered for listing, listing decisions made, and, if an NPL candidate is not proposed for listing, an explanation of the criteria applied and reasons for this decision.

The Superfund annual report should identify the sites (and associated future costs) that EPA anticipates will be funded using the Superfund budget (i.e., costs for Fund-lead actions) and the sites (and associated future costs) that the Agency anticipates that PRPs will fund. It also should show program expenditures in intramural and extramural cost categories. The Subcommittee recognizes that EPA may have legitimate concerns about maintaining the confidentiality sometimes necessary to preserve the Agency's enforcement discretion and may need to structure the report accordingly. However, the Subcommittee does not believe that EPA should continue to keep confidential the names and locations of NPL-candidate sites that the Agency chooses not to list in any given listing cycle.

The Superfund annual report should consist largely of data and information that EPA generates from its data systems, and should not be a glossy publication prepared using many hours of EPA staff time and extramural resources. In past years the Agency produced under CERCLA Section 301(h)(1) annual reports to Congress on Program progress. These previous reports are useful models for the Agency to consider as it implements Recommendation 5.



Recommendation 6: EPA should establish standard protocols to ensure that regional offices publicly communicate available information on site conditions and current and potential future threats to humans and the environment: (1) when a site is dropped from the Superfund site assessment process, and (2) when an NPL- candidate site is not proposed for NPL listing.

Recommendation 6 asks that in the future EPA improve the transparency of its decision making and increase the information it makes available to the public at two critical points: (1) when sites are screened from further assessment under Superfund, and (2) when the Agency chooses not to list an NPL-candidate site.

Sites Screened Out During the Superfund Site Assessment Process

Sites are screened from further consideration under Superfund mainly for two reasons: (1) EPA determines that they will not achieve an HRS score of 28.5 or higher, and (2) a number of other reasons cause eligible sites to be screened out, for example the site can be appropriately addressed under a non-NPL cleanup program, such as the RCRA corrective action program, or because PRPs enter into a voluntary agreement to carry out the cleanup.

EPA also might screen out an NPL-eligible site if the default assumptions and underlying presumptions used in the HRS model are not consistent with actual site-specific conditions, based on an evaluation of the immediacy and significance of current and potential threats posed by the site and the number and types of receptors (humans and environmental) that may be at risk. The Agency also might screen out an NPL-eligible site if EPA headquarters review indicates an error in site characterization or any other problem with an HRS package, or if the EPA decision-maker for NPL listing, the Assistant Administrator for Solid Waste and Emergency Response determines in his or her judgment that a site does not warrant listing.

Generally, sites that are screened from further assessment are reflected in EPA's Superfund information tracking system (CERCLIS) as "No Further Remedial Action Planned under CERCLA" or "NFRAP." Sometimes, particularly in the case of NPL-eligible sites, sites that are screened out are not reflected as NFRAP and instead are tracked informally by the EPA regional offices for future consideration.

Although sites screened from further consideration have been judged by EPA to not require action under Superfund, they typically are not contaminant free—some environmental contamination may be present even if it does not rise to the level of being a national priority under Superfund. While the Subcommittee recognizes that minimizing further expenditure of Superfund resources at these sites is important, it is also concerned that sites screened from further assessment under Superfund may be misconstrued by some as being "clean," even when site conditions may pose threats to humans and the environment. To prevent such misunderstandings, EPA should communicate clearly and publicly about the condition and status of sites that are screened from further consideration under Superfund.

NPL-Candidate Sites Not Proposed for Listing

While the Subcommittee recognizes and affirms EPA's need to exercise professional judgment and discretion in selecting which sites to propose for listing on the NPL, it believes these decisions should be transparent. EPA cannot assume that its decisions to not list NPL-candidate sites will somehow change the fundamental equation that caused the sites to be recommended for listing in the first place. Except in cases where PRPs or others step forward to initiate and fund appropriate cleanup, the Subcommittee does not expect that NPL-candidate sites will be addressed by other environmental remediation programs. Generally other appropriate programs are considered by regional offices during the site screening process and, if another program is available and appropriate, sites generally are addressed by that program rather than recommended for NPL listing.

Thus, EPA especially must communicate clearly and timely about its decisions to list or not list NPL-candidate sites.

Standard Communication Protocols

Recommendation 6 advises EPA to establish standard protocols to ensure that in the future regional offices communicate publicly and clearly about sites that are screened out during the Superfund site assessment process and NPL-candidate sites that are not proposed for listing. The Subcommittee discussed that these standard communication protocols would apply to future decisions to screen sites out of the Superfund site assessment process and future decisions about NPL-candidate sites. Communication should focus on the known interested parties associated with a site, such as state environmental agencies, Tribal and local governments, potentially affected communities, and known PRPs. EPA's efforts to provide opportunities for stakeholders to become involved earlier in the site assessment process will assist the Agency in identifying interested parties (Recommendation 3). Communication should state explicitly that the site has not been determined to be clean (unless it has); should include whatever information is readily available about the types and concentrations of contaminants likely to be present, the environmental media affected, the potential receptors, on going cleanup efforts under other programs, if any, and other relevant site conditions; and should explain EPA's reasons for screening the site from further consideration under Superfund or, in the case of an NPL-candidate site, deciding not to propose the site to the NPL.

When determining the most appropriate communication mechanism, EPA should consider whether there are ongoing efforts by other parties to address sites, and whether there are ongoing stakeholder and community involvement efforts. For example, where a state environmental program is adequately addressing a site and is appropriately involving stakeholders, the best communication method may be to post information about the site assessment process and the decision to screen out a site on the EPA website and work with the state environmental program to notify stakeholders of the availability of this information. Where there are not ongoing efforts, more direct communication to individual stakeholders is particularly important.

The Subcommittee emphasizes that EPA should avoid duplication of effort and duplicative (and potentially confusing) communication with stakeholders where effective communication is already taking place, and that EPA should implement this recommendation using the least costly communication methods that are effective. This point was particularly important to some Subcommittee members who believe that EPA should carefully limit the amount of resources it devotes to reports on sites that are a low priority or are being adequately addressed under non-Superfund programs.^V These members stress that EPA should apply Recommendation 6 to future decisions, and not

^V Subcommittee member Mel Skaggs addresses his concerns about the potential cumulative budgetary impact of the many new processes, surveys, committees, and studies discussed throughout this report in his individual statement. See Attachment A for Mr. Skaggs' individual statement.

divert Program resources to additional reports on the over 43,000 sites that have been screened out of Superfund to date.^W

What Should Be the Relationship of Other Programs to the NPL?

In 2002, in response to questions posed by the Subcommittee, EPA surveyed the regional offices about their efforts to consider other programs during the site screening and assessment processes. All ten EPA regional offices confirmed that they convene meetings of a Regional Decision Team or similar body to coordinate evaluation of which sites most need to be addressed using the NPL and which might be appropriately addressed using a non-Superfund cleanup program. However, the non-Superfund alternatives considered and the methods and nature of this analysis vary significantly among regions. Nine regions reported routine meetings with state program managers to coordinate cleanup priorities; seven reported similar meetings with the Superfund removal program; and three reported routine meetings with other EPA programs, such as the RCRA corrective action program. The regions also reported that they consult informally with these programs before proposing a site to the NPL, and eight regions reported that they also consider other federal agency response programs before proposing a site to the NPL, such as those of the Departments of Defense and the Interior.

The Subcommittee had extensive discussions about the role that other cleanup programs should play relative to the NPL. The primary outcome of these discussions was recognition that other cleanup programs should work in harmony with the NPL, and that both a strong, functioning NPL program and strong, functioning non-Superfund cleanup programs are needed to address the full range of contaminated sites and cleanup challenges that exist in this country. A strong NPL program is important, in part, because it serves to strengthen other cleanup programs, particularly state programs, by providing a strong enforcement mechanism if progress is not made. A strong, well-financed Superfund enforcement program can increase cleanups and reduce the need for federal funding.

The second outcome of the Subcommittee deliberations on other programs was a desire to ensure that to the extent other programs offer authorities, processes, or funds that will facilitate cleanup of NPL-eligible sites, these “tools” are known and available to EPA regional offices.

The Subcommittee identified several ways in which non-Superfund cleanup programs might work in harmony with the NPL and NPL cleanups.

^W Subcommittee member Vicky Peters agrees that EPA should not spend its resources tracking sites that would not qualify for the NPL. See Attachment A for Mr. Peters’ individual statement.

Supplemental Funding. A non-Superfund program might provide sources of funding that could be used to supplement funding under Superfund. For example, the Subcommittee discussed whether, under some circumstances the U.S. Army Corps of Engineers,⁸ might provide funding for environmental dredging in ways that may complement an ongoing Superfund cleanup. The programs considered by the Subcommittee in general do not have resources adequate to independently fund expensive NPL-caliber cleanups. At the same time, any potential for additional resources at specific sites should be seriously considered and carefully investigated, especially in a time of funding challenges when even a relatively small amount of additional funding might make a difference at a particular site. In cases where funding is provided at a Superfund site by another government Agency, it is critical that EPA retain the authorities it already has under CERCLA, which ensures that cleanups are protective of human health and the environment.

Additional Cleanup Authority. Authorities from non-Superfund programs might be used in combination with the Superfund Program to provide additional cleanup authorities or strategies to augment a Superfund cleanup. These coordinated approaches have been used at a number of Superfund sites, such as the Grand Calumet cleanup, and are currently being piloted under EPA's and the U.S. Army Corps of Engineers' Urban Rivers Restoration Initiative and Land Revitalization Agenda.⁷

Supplemental Administrative Oversight and Enforcement. Some non-Superfund programs might provide a viable alternative administrative framework under which cleanup activities at a site could be appropriately overseen or enforced so that a Superfund action is not necessary. For example, Superfund already has a policy of deferring responsibility for cleanup to the RCRA corrective action program, where that program applies.⁹ Use of a non-Superfund program to oversee or enforce cleanup might also be appropriate where site investigations and cleanup activities will be funded by PRPs and a state program can provide appropriate oversight of the PRP cleanup. Again, to the extent that non-Superfund programs can provide appropriate oversight of cleanup of NPL-eligible sites and have the capacity (staff, authorities and resources) to carry out this oversight, they are important alternatives and their use will allow Superfund resources to be directed only toward sites where such resources are most needed.

This section describes the Subcommittee's consensus recommendations on three ways for EPA improving EPA's coordination with non-Superfund programs (Recommendation 7), and encourages EPA to continue to invest in building the capacities of state and Tribal environmental programs (Recommendation 8). This section also describes the Subcommittee's deliberations on three issues about which it did not reach consensus: the circumstances under which non-Superfund programs should be used at NPL-eligible sites, the circumstances under which available funds from non-Superfund programs should be leveraged at listed NPL sites, and whether technical assistance grants should be available at certain NPL-eligible sites that are not proposed for listing.



Recommendation 7: EPA should (1) ensure that regional offices have knowledge and understanding of the capabilities and applicability of non-Superfund programs; (2) develop relationships with key managers in other programs, particularly federal programs, to facilitate coordination; and (3) promote greater standardization of coordinating mechanisms, particularly for large, complex sites.

Recommendation 7 calls on EPA to improve its coordination with other programs in three areas: information and knowledge, relationship building, and coordinating mechanisms. As described earlier, the Subcommittee also discussed, but did not reach consensus on, a recommendation that EPA should consistently consider non-Superfund programs to address all or portions of NPL-eligible sites. Some Subcommittee members felt strongly that EPA should consider and, where appropriate, ensure use of non-Superfund programs for NPL-eligible sites.^x Other members were uncomfortable with use of non-Superfund programs unless such programs meet or exceed Superfund standards. The Subcommittee's range of views on this issue is described more fully later in this section.

Information, Knowledge, and Relationship Building

EPA should ensure that states, regions, and other interested parties have easy access to accurate, up-to-date information about the strengths, weaknesses, and capabilities of other federal programs that undertake cleanups or activities that might result in or contribute to cleanups (and therefore potentially complement Superfund activities). EPA also should provide support for regional project managers who wish to consider coordination or collaboration with such programs. This will assist regional offices in determining whether and how non-NPL programs might be appropriate for a specific site.

Similarly, other agencies' knowledge of Superfund should be improved so they can more effectively plan their activities to be complementary to Superfund cleanup objectives. EPA should identify other programs with a potential to be useful at Superfund sites, and should make an effort to educate staff in EPA and in the other programs about potential opportunities for, and benefits of, working together.

When it can be done without diminishing EPA's core mission to protect human health and the environment, EPA should explore options such as memoranda of agreement or other arrangements with non-NPL programs to further coordination and ensure that EPA's statutory authorities under CERCLA are not impaired.^y

^x Subcommittee member Richard Stewart supports this view. See Attachment A for Mr. Stewart's individual statement.

^y Subcommittee member Mel Skaggs summarizes one such application of a memoranda of understanding, between USEPA and USACE in the Urban Rivers Restoration Initiative pilot program, in his individual statement. See Attachment A for Mr. Skaggs' individual statement.

Greater Standardization of Coordination Efforts

EPA should establish guidelines for consideration of non-Superfund programs. Such guidelines should not impede the discretion of EPA to list a site as soon as it determines listing is warranted, but should also emphasize the potential usefulness of non-Superfund cleanup programs where they can provide oversight or other resources to appropriately clean up sites.

For most sites, the Subcommittee favors an approach that advises EPA to achieve the outcomes of coordination, but leaves to EPA and its partners the responsibility of determining how best to achieve those outcomes. It seems likely that the most efficient means for EPA to accomplish the coordination outcomes recommended by the Subcommittee by improving the regional infrastructures for coordination where they exist (for example, Regional Decision Teams) or by creating new regional mechanisms, rather than establishing a new standardized, national mechanism. (Note that in the description of the Subcommittee deliberations on Recommendation 3, the Subcommittee observed that it may be necessary to establish national guidance on coordination or take other steps to further coordination goals.)

The exception to this general principle is mega sites, for which the Subcommittee believes that a more formal, standardized approach is warranted.

The Subcommittee had extensive discussions about the exact form that this more standardized approach to coordination for mega sites should take and discussed at length the concept of a “coordinating committee” to accomplish coordination goals. Some Subcommittee members strongly supported a coordinating committee as a way to formalize and routinize coordination practices.^z Other members were concerned that a coordination committee might impede EPA’s discretion to make listing decisions. In the end, the Subcommittee did not reach consensus about whether such committees should be established or, if established, the “level” at which a coordinating committee for mega sites should operate (e.g., national, regional, or site-specific), the individuals who might serve on such a committee, and whether a committee should serve as an information-sharing venue only or should offer non-binding recommendations to EPA decision makers.

Despite its diversity of views, the Subcommittee did reach consensus on both the need for increased, formalized coordination on large, complex sites and on a number of goals for such a coordination effort, as follows:

- ➔ Coordinating mechanisms should provide a forum for evaluating large, complex and expensive sites and sharing and soliciting information with and from interested parties in a way that enables EPA to make more fully informed listing decisions.

^z Subcommittee member Richard Stewart supports this view. See Attachment A for Mr. Stewart’s individual statement.

- ➔ Coordination should be carried out transparently, and should provide opportunities for involvement by officials from other programs, PRPs, site neighbors, affected communities, and other interested groups and individuals, by reaching out to them to share and solicit information.
- ➔ Coordinating mechanisms should not constrain EPA's discretion to make NPL listing decisions. EPA alone is responsible for listing decisions, and has a responsibility to make such decisions in a timely and efficient way in light of site-specific data that EPA determines is available and reliable. (Note that while Subcommittee members agreed on this point, they did not agree on whether coordinating committees, if established, should offer non-binding recommendations or function solely as information-sharing venues.)

In addition, some Subcommittee members believed that coordinating mechanisms should have as one of their goals evaluating the challenges and opportunities presented by large complex sites and ensuring that the capacity of other cleanup programs to provide oversight and funding inappropriately considered. Other Subcommittee members did not support this view, largely because of their concern about the use of non-Superfund programs that might not meet or exceed Superfund standards. (This issue is discussed further in the description on the Subcommittee's range of views on the use of non-Superfund programs.)



Recommendation 8: EPA should continue to invest in capacity building for state and Tribal cleanup programs.

The Subcommittee considered a great deal of information on the range of cleanup programs among the states, including the Environmental Law Institute's Analysis of State Superfund Programs: 2001 Update. The ELI analysis is a compendium of statutes, program organization, staff, funding, cleanup standards and activities, enforcement provisions, and amount of money spent on cleanup for all 50 states.¹⁰ Given the array of individual state capacities and the challenges faced by state programs (e.g., declining state budgets), the Subcommittee urges EPA to continue its efforts to build the capacity of state remediation programs. Less is known about Tribal environmental cleanup programs, many of which are still in the early stages of program development.

While states and Tribal Nations do not have the resources to independently pay for cleanup at most NPL-caliber sites, building capacity within state and Tribal programs to continue to fund cleanup at smaller, lower-risk sites and to oversee PRP-lead cleanup is essential to maintaining a strong national Superfund program. Using information available in the ELI analysis, EPA should evaluate and consider ways to build capacity in states and Tribal Nations that have:

- ➔ A significant number of unaddressed or unevaluated sites;
- ➔ Insufficient cleanup programs; or
- ➔ Ineffective use of enforcement authorities or prevention programs.

EPA should particularly continue to invest in capacity building for interested Tribal Nations, to enable them to address more sites under their jurisdictions.

While exact capacity building activities will depend on the needs of the state or Tribal Nations in question, they might include many of the activities EPA already undertakes to assist state and Tribal programs, such as federal grants, education and training, and technical support.

Special Consideration of State Programs

Virtually every state has some form of cleanup program. Many states have multiple programs, including brownfields programs, voluntary cleanup programs, property transfer programs, and state programs modeled after the federal Superfund Program. State cleanup programs are an important piece of the cleanup puzzle. They serve as a complement to the national Superfund Program by providing for the cleanup of many sites that are not eligible for the NPL and, in some cases, by providing administrative mechanisms to oversee cleanups at sites that would be eligible for the NPL. Collectively, state programs have addressed many thousands of contaminated sites – including some NPL-eligible sites – and it is expected they will continue to do so.

Subcommittee members had very divergent views about the range of cleanup approaches, strengths, weaknesses, and capacities across state programs. Many Subcommittee members had direct experience with various state programs and believe that EPA should consider a study to evaluate the strengths and weakness of state approaches and to consider the relevance of these approaches to the federal Superfund Program. Other Subcommittee members were concerned that state programs may not have the resources or authorities to adequately provide for or oversee the cleanup of an NPL-eligible site, or were concerned that state programs may not meet or exceed NPL standards and therefore should not be used at NPL-eligible sites.

Deliberations on Ensuring Consideration of and Coordination with Non-NPL Programs

The Subcommittee considered but did not reach consensus on a recommendation that would call for EPA to ensure that regional offices consistently evaluate the availability of state cleanup programs and non-Superfund federal programs to clean up all or portions of NPL-eligible sites and to encourage use of such programs where they can provide for appropriate cleanup (either with funding or through oversight of PRP-funded actions).

The Subcommittee's lack of consensus on this matter turned on the issue of what standards or procedures non-Superfund programs should use to appropriately clean up all or a portion of an NPL-eligible site. Subcommittee members had very strong views about what it means for another program to "appropriately" clean up an NPL-eligible site.

Some Subcommittee members believe that non-Superfund programs should be used at all or portions of NPL-eligible sites only where such programs meet or exceed Superfund's protections for public health, community participation, environmental quality, liability, and other vital, health-protective standards. These Subcommittee members also were concerned that allowing for use of non-Superfund programs at all or portions of an NPL-eligible site could result in (1) passing responsibility for cleanup to programs that are ill-equipped to handle an NPL-eligible site, (2) weakening protections to humans or the environment, or (3) transferring cleanup costs to taxpayers.

Other Subcommittee members believe that a wide range of procedures can be used to achieve a remedy that adequately cleans up a site. These members cautioned against an approach that would require non-Superfund programs to be operationally like the Superfund Program to adequately clean up all or portions of NPL-eligible sites. They emphasized that all cleanup programs, including Superfund, have both strengths and weaknesses. Non-Superfund programs exist under their own statutory constructs, are designed to achieve their results in manners consistent with their respective statutory purpose, and do not have to emulate Superfund's process in order to achieve outcomes that will result in protection of human health and the environment with meaningful public involvement. Further, these members noted that, wherever cleanups are performed under other statutes, EPA retains its authority under Superfund should it be needed if non-Superfund programs are not acting appropriately.^{AABB}

Deliberations on Leveraging Non-Superfund Program Resources

The Subcommittee considered but did not reach consensus on, a recommendation that would have advised EPA to use its understanding of non-Superfund programs and relationship with key managers in non-Superfund programs to optimize and leverage the use of any available resources from these programs to meet EPA's obligations at NPL sites.^{CC}

The example of how this leveraging might work most often discussed by the Subcommittee was normal dredging activities carried out by the U.S. Army Corps of Engineers. If properly carried out and coordinated with Superfund, the mobilization of

^{AA} Subcommittee member Richard Stewart supports this view. See Attachment A for Mr. Stewart's individual statement.

^{BB} Subcommittee member Vicky Peters disagrees with this statement. See Attachment A for Ms. Peters' individual statement and for the individual statement of Doris Cellarius. Ms. Peters' agrees with Ms. Cellarius' views on this issue.

^{CC} Subcommittee member Vicky Peters supports leveraging of funds from other programs with the understanding that such funds would be used at taxpayer funded cleanups or, as appropriate, to fund "orphan shares", not to supplant responsible parties' liability. See Attachment A for Ms. Peters' individual statement.

people and equipment associated with these activities could serve “double duty” by also dredging or conducting other activities beneficial to a Superfund cleanup, so long as EPA retains its authorities under CERCLA to ensure that cleanups protect human health and the environment.^{DD} The Subcommittee also considered the economic opportunities that may be associated with NPL sites at or near areas being proposed for re-development.

The Subcommittee also discussed that, for routine activities carried out by non-Superfund programs to complement cleanup of an NPL site, project managers in other programs may have to work with project managers from the Superfund Program to coordinate standard protocols and decision making. The Subcommittee discussed that EPA may wish to explore memoranda of agreement or other arrangements with non-NPL programs to facilitate such coordination.

In the end, the Subcommittee did not reach consensus on a recommendation about leveraging resources from non-Superfund programs, largely because of its inability to reach consensus on what standards or procedures a non-Superfund programs should use to appropriately clean up all or a portion of an NPL-eligible site. As described above, some Subcommittee members believe that non-Superfund programs should be used at all or portions of NPL-eligible sites only where such programs meet or exceed Superfund’s protections for public health, community participation, environmental quality, liability, and other vital, health-protective standards. Other members believe that a wide range of procedures can be used to achieve a remedy that adequately cleans up a site.

Deliberations on Expanding Technical Assistance Grants

The Subcommittee also considered but was unable to reach consensus on a recommendation dealing with technical assistance grants or TAGs.

Some Subcommittee members wanted to recommend that EPA enable TAGs to be given, where appropriate, to groups of individuals affected by NPL-eligible sites that are not listed. These members were comfortable that EPA’s rulemaking authority gives the Agency the discretion to extend the availability of TAGs in this way. CERCLA provides that the “President may make grants available to any group of individuals which may be affected by a release or threatened release at any facility which is listed on the National Priorities List under the National Contingency Plan” (42 U.S.C. 9617(e)). Some Subcommittee members believe that this provision does not preclude EPA from making such grants available to other groups. They noted that current EPA regulations regarding TAGs already interpret CERCLA to allow grants at sites that are not listed on the NPL but that are proposed for listing (40 CFR 35.4020(a)(1)).

^{DD} Subcommittee member Mel Skaggs addresses one such approach using memoranda of understanding, between USEPA and USACE in the Urban Rivers Restoration Initiative pilot program, in his individual statement. See Attachment A for Mr. Skaggs’ individual statement.

Subcommittee members who support EPA's expanding the availability of TAGs believe that such an expansion will further increase the capacity of state and Tribal cleanup programs, by improving the ability of affected communities to participate in cleanup actions. They do not argue that TAGs be provided for every contaminated site. Rather, these members believe TAGs should be considered only for NPL-eligible sites that, in the absence of another acceptable cleanup program, would need to be listed and remediated under CERCLA. Under this approach, TAGs for non-NPL sites would only be available when TAG funding exceeds requests for TAGs at listed sites. Relatively few communities desire a TAG, but where the public believes having one is essential to their comfort with the cleanup process, provision of a TAG at an unlisted, NPL-eligible site could facilitate public buy-in to a non-Superfund cleanup program and thereby conserve Superfund Program resources.^{EE}

Other Subcommittee members were unwilling to support a recommendation that EPA expand the availability of TAGs, believing that such an expansion could not be accomplished without a statutory change and that recommending such a statutory change was beyond the scope of the Subcommittee. These members were also concerned that expanding the TAG program to non-NPL sites could further decrease the money available to carry out cleanups at NPL sites, counter to many of the Subcommittee's other recommendations in this report.^{FF}

How Should EPA Set Priorities Among Listed Sites?

The Subcommittee considered, but did not reach consensus on a recommendation that EPA should set priorities for funding at sites listed on the NPL by using a rigorous and transparent process based primarily on threats to humans and the environment, but also taking into consideration socioeconomic and program management factors.

Some Subcommittee members believe that any site listed on the NPL is by definition a national priority, and should be investigated and cleaned up in a timely fashion. For these members, prioritizing among such sites creates very difficult choices, as the selection of any site or activity for action may mean another site will not receive resources and may remain a threat to human health and the environment. These Subcommittee members believe that such choices should be made in consideration of both threats to humans and the environment and program management considerations and that, in some instances, programs management considerations (such as maintaining a strong enforcement program or seizing an opportunity to leverage funds from a non-Superfund program) could significantly influence priority setting.

^{EE} Subcommittee member Vicky Peters supports expanding the availability of TAG's. See Attachment A for Ms. Peters' individual statement.

^{FF} Subcommittee member Richard Stewart supports these views. See Attachment A for Mr. Stewart's individual statement.

Other Subcommittee members disagreed with this view. They recognize that decisions about prioritization could be very difficult, and agreed that EPA should consider threats to humans and the environment and program management considerations. However, they also believe that information on actual threats to humans and the environment should be used to guide difficult priority choices and that addressing ongoing threats to humans should be the Agency's highest priority.^{GGHH}

Differences in views about how EPA should set priorities for funding sites listed on the NPL were complicated by the Subcommittee's differences in views about the types of sites that should be listed in the first place. Some Subcommittee members believe that EPA's current approach to making decisions about NPL eligibility—which relies on the HRS as a screening tool to identify eligible sites and the professional judgment of EPA decision makers to identify which eligible sites to propose for listing—is appropriate. Furthermore, these members believe that more intensive and expensive risk assessment should be undertaken only at the eligible sites that EPA decides to list on the NPL.

Other Subcommittee members disagree with these views. Some of them believe that EPA should make decisions about which sites to list by evaluating the actual risks posed by sites to people and the environment, i.e., an approach akin to risk assessment. Others believe that the HRS allows too many sites to become eligible for NPL listing and that, because a wide range of sites are eligible, EPA has too much discretion to choose to list sites that may not present current threats to people or the environment.^{II}

Deliberations on Principles for Priority Setting

In the context of its divergent views, the Subcommittee recognized the practical reality that EPA most likely will continue to have to set priorities for spending at NPL sites. The Subcommittee discussed but did not reach consensus on a set of principles that might be used to guide priority setting.

During these deliberations, some Subcommittee members supported use of the following principles to guide priority setting.^{JJ}

^{GG} Subcommittee member Jim Derouin believes that, to assure both the integrity and the efficiency of the Program, the Agency must adopt a “worst first” priority approach that assures that funds are directed to those sites, and those portions of mega sites, that pose the worst human health risks/exposures. See Attachment A for Mr. Derouin's individual statement.

^{HH} Subcommittee member Richard Stewart supports this view. See Attachment A for Mr. Stewart's individual statement.

^{II} Subcommittee member Richard Stewart supports this view. See Attachment A for Mr. Stewart's individual statement.

^{JJ} Subcommittee member Vicky Peters supports these principles. See Attachment A for Ms. Peters' individual statement.

- ➔ The primary question EPA should evaluate when considering priorities for funding is “*What is the consequence of delaying remedial action?*” While this question may be implied in EPA’s current prioritization process, it is necessary for the Agency to consider it explicitly, and weigh the consequences thoughtfully at each site. In some cases, such implications could be on-going unacceptable risks, or a lost opportunity to leverage activities and resources from other programs. In others, delay could allow contaminant migration and result in greater and more significant contaminated natural resources, and greater risks to future populations who should be afforded equal protection as that provided current exposed populations.^{KK}
- ➔ Priorities should be set remedial action by remedial action. EPA’s current practice is to prioritize remedial actions, not entire releases or sites. Thus, one remedial action at one site may rank as a high priority and be provided with funding, while others at the same site wait for later funding cycles. The Subcommittee concurs with this practice, which can be particularly important at large, complex sites with discrete remedial activities.
- ➔ Any prioritization should be conducted with meaningful participation by affected stakeholders, who should be consulted regarding the considerations that should determine the prioritization of remedial activities at their site, the conclusions reached based upon input provided, and any ultimate prioritization decisions. This transparency is critical in order to improve decision making and foster greater acceptance of decisions by the public.
- ➔ Setting priorities is about deciding which remedial actions to fund first. It is not about re-defining cleanup outcomes. All NPL listed sites must be cleaned up so that humans and the environment are fully protected as required by law. Every NPL site should be cleaned up within a reasonable timeframe.
- ➔ Considerations for setting priorities for remedial actions may differ from those applied to removals. For example, a removal action to provide an alternate water supply to individuals currently exposed to significantly elevated levels of contamination may be a very high priority for the removal program. However, the restoration of the contaminated aquifer may rank lower than prophylactic or other remedial measures that could be taken elsewhere where exposure pathways cannot be intercepted.
- ➔ No prioritization process should assume its outcome. While as a practical matter it may be rare that threats to a sensitive ecosystem would be given a higher priority than ongoing threats to humans, such an outcome is possible, depending upon the facts presented.

Other Subcommittee members did not support these principles, arguing that they would not offer EPA enough guidance on how it should approach difficult choices and/or that

^{KK} Subcommittee member Richard Stewart believes that EPA should not focus solely on the consequences of delaying remedial action at given sites, but must balance such consequences against the consequences of not using the funds for clean up at other sites that may present greater risks to health and the environment. See Attachment A for Mr. Stewart’s individual statement.

they allow for the possibility that environmental concerns could be prioritized over ongoing threats to humans.^{LL}

■ Deliberations on Factors for Priority Setting

Similarly, in the context of its divergent views about the types of sites that should be listed on the NPL, and the role that evaluation of ongoing threats to humans should play in priority setting, the Subcommittee discussed a set of 16 factors divided into 2 tiers that EPA might use to guide priority decisions.^{MM}

Tier 1 included primary factors, those most closely related to threats to humans and the environment and source control. Tier 2 included secondary factors, those largely associated with socioeconomic issues and program management concerns.

Some Subcommittee members supported consideration of the following factors to set priorities among listed sites, noting that they are drawn in large part from EPA's current priority-setting practices, as outlined in the guidance memo "Remedial Action Priority Setting" (January 19, 1996).¹¹

Tier 1: Primary Factors Related to Threats to Humans and Significant Environments and Source Control

Human Receptors

- Threats to human population exposed: These include population size and proximity to contaminants.
- Likelihood of exposure if no remedial action is taken: This includes consideration of the stability of contaminants, reliability of any containment structures, and effectiveness of any institutional or physical controls.
- Nature of likely exposure: This includes consideration of whether an exposure is currently occurring or is a potential future occurrence and whether exposures are acute or chronic.
- Sensitive receptors or exposure pathways: These include receptors with multiple chemical exposures or other confounding factors and receptors that may be exposed via multiple exposure pathways.
- Contaminant toxicity: This includes toxic and carcinogenic effects, volume, and contaminant concentrations.

^{LL} Subcommittee member Richard Stewart supports this view. See Attachment A for Mr. Stewart's individual statement.

^{MM} Subcommittee member Vicky Peters supports the application of these factors. See Attachment A for Ms. Peters' individual statement.

Significant Environments

- Threats to ecological receptors: These include threats to threatened or endangered species and their critical habitats, keystone species, migratory birds, amphibians, fisheries, and other sensitive ecological receptors.
- Threats to environmental receptors: These include threats to ground-water aquifers and other significant natural resources.

Source Control

- Remedial actions that result in control of ongoing sources of contamination are particularly important because of their potential to reduce overall cleanup burdens and costs.

Tier 2: Secondary Factors Related to Program Management

- Environmental justice factors: These include factors at sites that affect Tribal interests, treaties, statutory requirements (e.g., American Indian Religious Freedom Act) and trust responsibilities.
- Maintaining a strong enforcement presence: One of the benefits of the Superfund Program is that the mere possibility of a Superfund action may prompt responsible parties to initiate and fund cleanups, reducing burdens on the limited public funding available. Because these cleanups are often initiated and then overseen under state environmental remediation programs, a strong, vital Superfund program is also important in maintaining strong, vital state programs. For this benefit to continue, the threat of Superfund action must continue to be real. Consideration of this factor may cause EPA to elevate the priority of sites that, based strictly on an evaluation of threats, may present less concern than other sites.
- Evaluating short- and long-term implications: A focus on controlling sources and addressing current human exposures does not obviate the need to address other risks and remaining contaminants. On a site-by-site basis, delaying site investigation and cleanup will increase overall site costs and increase social and opportunity costs to communities that must tolerate contaminated sites longer, even though they are not experiencing current exposures. This overall cost increase at individual sites and in individual communities must be balanced against the dilemma that, particularly in a climate of limited resources, the costs of failing to adequately address current exposures and ongoing sources at all sites may result in the growth of both adverse human health impacts and cleanup costs. In some cases, the cost savings of rapid action may be dramatic, if it prevents migration of contamination to, for example, additional media, cultural resources, receptors, or sensitive ecosystems. Evaluations of short- and long-term implications should consider life-cycle costs related to prompt implementation versus postponement of planned activities, and any cost savings that might be achieved by reducing routine management costs associated with maintenance of interim actions or other controls that might be instituted in advance of final cleanup.
- Minimizing costs associated with mobilization and demobilization for cleanup: Cleanup strategies should maximize the use of skilled and knowledgeable

workers, labs, cleanup contractors and managers with institutional memory. Work flow logic in connection with other planned or ongoing activities should also be considered.

- ➔ Making meaningful progress in all communities: Progress should be made in all communities, with a particular emphasis placed on communities that have been disproportionately affected by environmental contamination.
- ➔ Leveraging activities that are already funded or have the potential to be funded by other programs: The ability to leverage funding associated with other programs or activities may justify the assignment of a higher priority to a site because it could lower overall costs.
- ➔ Advancing knowledge of innovative treatment technologies: The development and implementation of new technologies at one or more sites could pave the way to their wider use and greater cost savings at other sites with similar contamination.
- ➔ Support for cleanup: An important factor should be the degree of support from affected communities and from state, local, and Tribal governments.

Other Subcommittee members were generally comfortable with the factors described, but believed they would not provide useful guidance to the Agency without additional information on how the factors should be applied. Again, in discussions of this issue, it became clear that the Subcommittee did not agree on the role that evaluation of risk should play in determining EPA's actions under the Superfund Program. Some members believed that EPA should prioritize ongoing threats to humans over other threats and considerations.^{NN} Other Subcommittee members strongly disagreed, believing that such an approach would be contrary to CERCLA and would abrogate EPA's responsibility to ensure that cleanup protect both humans and the environment.

Some Subcommittee members thought the factors were incomplete, and should be expanded to include consideration of additional societal and economic factors, such as the potential negative impacts of requiring expenditures of taxpayer or private money for unnecessary studies or cleanups. Other Subcommittee members strongly disagreed with this view.

Increasing Transparency in EPA's Decisions about Priorities

Although they had very different views about how EPA should set priorities for funding among sites listed on the NPL, Subcommittee members agreed that that EPA should create more openness and transparency around decisions about setting priorities and allocating funding. The current prioritization process seems to occur entirely within EPA—without opportunities for input even from the Agency's co-regulators in state

^{NN} Subcommittee member Jim Derouin believes that, to assure both the integrity and the efficiency of the Program, the Agency must adopt a “worst first” priority approach that assures that funds are directed to those sites, and those portions of mega sites, that pose the worst human health risks/exposures. See Attachment A for Mr. Derouin's individual statement.

environmental agencies and Tribal governments. Without prescribing a specific process that EPA should use to increase the transparency of priority-setting decisions, the Subcommittee emphasizes that these difficult choices and their implications should be made using clear and understandable criteria and should be explained publicly.

■ **Setting Priorities at Other Stages in the Pipeline**

The Subcommittee also discussed but did not fully resolve issues associated with other points in the cleanup pipeline at which EPA should set priorities. The outcome of these discussions was an acknowledgment that EPA should be encouraged to look at the full range of its site-specific activities in any given year when setting priorities, with the most formal priority setting occurring for the most expensive activities (i.e., remedial actions). This emphasis is not intended to diminish the importance of robust funding for other pipeline activities. In particular, EPA must continue to fund remedial investigations and feasibility studies and other necessary site characterization activities at newly listed sites, so that the Agency will have more complete information upon which to base subsequent priority-setting decisions.

Should EPA Reallocate Resources? If So, How?

The success of the Superfund Program depends both upon EPA's ability to manage and direct human and financial resources efficiently and upon having an adequate budget consistent with carrying out the Program's responsibilities. The Subcommittee considered but was unable to reach consensus on a number of issues related to how EPA allocates Superfund Program resources and Program funding.

■ **Deliberations on EPA Spending Decisions**

Overall and as a percentage of the total Superfund Program budget, the amount of money EPA spends for activities at specific sites has declined in recent years. The Subcommittee believes this spending trend should be reversed, so that EPA spends more, rather than less, money on work directly related to improving public health and environmental conditions at actual sites. While the Subcommittee agreed on this point, it did not agree on two related points and therefore could not reach consensus on a specific recommendation about how EPA should prioritize Superfund Program spending.

First, some Subcommittee members were unwilling to support a recommendation calling for EPA to shift spending within the Superfund Program without a complementary recommendation to increase the overall level of Program funding to address the backlog

of remedial actions that are ongoing or ready to start but cannot proceed or must proceed more slowly because of lack of federal funds.^{OO}

Second, Subcommittee members did not share a common view about the types of activities that are directly related to improving public health and environmental conditions at actual sites, and that should therefore be the focus of Program spending. Some members thought that EPA should spend a larger percentage of its budget on extramural work at sites that are ready for remedial action, in order to complete remedial design and construction at a greater number of NPL sites.^{PP} Others argued that removals and long-term response actions are also critical elements to improving site conditions and should be included in any recommendation about how EPA should target Superfund Program spending.

Other Subcommittee members stressed that funding should be increased for all activities directly related to improving public health and environmental conditions at sites, including removals, remedial actions, long-term response actions, site investigations and characterization, studies, enforcement, and other activities that are necessary to preconditions to the overall process of remedy selection and implementation. Still other members stressed that increasing funding for cleanup would also increase the need for contract management and oversight activities, and that activities by the Office of the Inspector General (OIG), the Office of Research and Development (ORD), and the Department of Justice (DOJ) and other necessary actions are all important links to ensuring that the Superfund Program can adequately protect public health and environmental quality.

Deliberations on Auditing Superfund Appropriation Spending

The Subcommittee also considered but did not reach consensus on a recommendation calling for a neutral, independent audit of all activities paid for with money from the Superfund appropriation.

The Subcommittee could not reach consensus on a recommendation for an audit because of its inability to reach consensus on a recommendation addressing the overall funding level for the Superfund Program. As described above, some Subcommittee

^{OO} Subcommittee member Vicky Peters supports this view with the clarification that increased funding is necessary because reallocation of insufficient funding has resulted in bottle-necks elsewhere in the pipeline, decreased enforcement and oversight, decreased research and development, and reductions in other activities essential to an effective program, and because she believes the allocation would likely change from year to year as various sites advanced through the pipeline and important policy issues arose. See Attachment A for Ms. Peters' individual statement.

^{PP} Subcommittee member Jim Derouin believes that one efficiency problem facing EPA is that the Agency should direct, as a percentage of its budget, more funding to actual bricks and mortar remediation. See Attachment A for Mr. Derouin's individual statement.

members were unwilling to support recommendations for an independent audit of Superfund Program spending without a complementary recommendation to increase the overall level of Program funding, at least temporarily, to address the backlog of remedial actions.^{QQ}

The Subcommittee was aware that in the 2004 Superfund appropriation, Congress required that the OIG to evaluate Superfund Program expenditures within EPA headquarters and in the regional offices, and to recommend options for both increasing resource allocation to extramural funds for cleanup and minimizing administrative expenses.^{RR} In general, Subcommittee members who supported a neutral independent audit did not view the OIG audit as covering all of the audit elements that should be addressed. These additional elements include consideration of EPA's practice of covering budget shortfalls created by cost-of-living increases in federal salaries by reducing the extramural funding available to pay for cleanup, and evaluation of the numerous EPA offices besides OSWER that are partly funded with money from the Superfund appropriation. Some Subcommittee members noted that these offices include the OIG and believe that if an audit is carried out, it should be comprehensive and conducted by a truly independent, neutral third party.

Deliberations on Contract Reforms

The Subcommittee also considered but did not reach consensus on a recommendation advising EPA to pilot a number of specific contracts reforms, such as guaranteed, fixed-price remediation contracts; indefinite quantity contracts with guaranteed minimums; incentive based contracts; and requirements contracts.

As with the neutral, independent audit of the Superfund appropriation, the Subcommittee could not reach consensus on a recommendation on pilot testing contracts reforms because of its inability to reach consensus on a recommendation addressing the overall funding level for the Superfund Program.^{SS}

^{QQ} Subcommittee member Vicky Peters believes that although the OIG and the independent review by a high-level official in the Air Office would not provide the same information as the review the Subcommittee was considering, spending additional money on yet a third “audit” was not justifiable given the overwhelming evidence that the program was under-funded, and the fact that no one on the Subcommittee identified specific areas of programmatic waste apart from “earmarks to OIG and other offices.” See Attachment A for Ms. Peters’ individual statement.

^{RR} Subcommittee member Jim Derouin believes that one efficiency problem facing EPA is that the Agency should direct, as a percentage of its budget, more funding to actual bricks and mortar remediation. See Attachment A for Mr. Derouin’s individual statement.

^{SS} Subcommittee member Vicky Peters believes that it was not clear from the Subcommittee’s discussion that contract reforms would be beneficial and worth pursuing and based on the little known about these reforms, some were impracticable

Subcommittee members who support EPA's pilot testing contract reforms noted that a significant portion of the Superfund budget-----particularly the budget for site assessments and remedial actions-----is spent through contracts, referred to by EPA as "extramural" spending. These Subcommittee members recognize that reforming contracting practices poses challenges, but believe that because of the important role contracting plays in the overall Superfund budget particularly in the budget for on-the-ground cleanup activities----EPA should explore and capitalize on opportunities to improve its contracting practices.^{TT} These members further observed that other federal agencies such as the Departments of Defense and Energy have used a number of the contracting reforms discussed by the Subcommittee and believe that EPA should work with these agencies to gain from their experiences and use this information to improve the Agency's contract reform efforts.

Different Views on Superfund Program Funding

Subcommittee members agreed that the Superfund Program should:

- ➔ have sufficient resources to fulfill its responsibility of protecting human health and the environment at Superfund sites; and
- ➔ spend more, rather than less, money on work directly related to improving public health and environmental conditions at NPL sites.^{UU}

Subcommittee members had differing views on how these outcomes should be accomplished.

During the Subcommittee's deliberations EPA informed the members that there are a number of NPL sites at which remedial designs are complete but where remedial actions are slowed—or not yet started—because of insufficient funding. A series of OIG reports¹² and the congressionally requested estimate of funding needs for the Superfund Program, Resources for the Future's "Superfund's Future: What Will it Cost?"¹³ confirm that, although some additional money has periodically been made available for funding at some sites, a backlog of sites that require federal funding for removals, remedial actions, long-term response actions, and other activities remains.

given budget constraints, and some have been problematic when initiated by DOD. See Attachment A for Ms. Peters' individual statement.

^{TT} Subcommittee member Tom Newlon supports contract reforms as a component part of reforms that could help address the mega site backlog, consistent with his individual statement and other footnotes. See Attachment A for Mr. Newlon's individual statement.

^{UU} Subcommittee member Jim Derouin believes that one efficiency problem facing EPA is that the Agency should direct, as a percentage of its budget, more funding to actual bricks and mortar remediation. See Attachment A for Mr. Derouin's individual statement.

EPA uses diligent enforcement efforts to identify responsible parties and have them pay for cleanup; nonetheless, federal funding is needed at some sites. Some of the sites in the backlog have been in the Superfund Program for many years. The Subcommittee recognized that, if not addressed, this backlog of sites will continue to pose threats to communities, and cleanup costs at these sites will increase, sometimes dramatically. New Bedford, Massachusetts, where the Subcommittee held one its June 2003 meeting, is an example of such a site. The New Bedford Harbor mega site has been in the Superfund system for more than twenty years. The site is ready for remedy construction. Because of funding constraints, however, remedial action may stretch out for another twenty-five years, a schedule that is sub-optimal in terms of cost effectiveness as well as public health and the environment. The Subcommittee agreed that sites in the backlog should be cleaned up in a timely way.

Subcommittee members vigorously debated whether they could agree to recommend a temporary, limited, targeted increase in appropriations to the Superfund Program to address remedial actions at the backlog of sites until an independent audit of the Superfund budget was completed and a long-term Program spending plan was developed. Ultimately, the Subcommittee was unable to reach consensus on such a recommendation because of differences of opinion about three key issues: (1) the amount of funding that may be needed, (2) the extent to which the recommendation should restrict the types of sites at which EPA could expend supplemental funding, and (3) the sources of the funding – taxes or general appropriations.^{vv}

Funding Amount

The Subcommittee was not able to agree to an amount of supplemental funding to recommend. Some members argued the need for \$300-\$800 million a year. Subcommittee members who supported funding in this range cited three reports to support their view. First, Resources for the Future reported that the Superfund Program would likely need increased funding throughout this decade to adequately fund cleanups.¹⁴ However, actual appropriations have been \$300-\$800 million below RFF's inflation-adjusted base and high estimates. Second, EPA's 2004 OIG report released Agency documents demonstrating that the resource needs for activities included in the FY 2002 remedial action advise of allowance (i.e. remedial actions, long-term response actions, five-year reviews, enforcement fairness projects, above-the-base removal actions, and redevelopment/reuse projects) are nearly three times the budgeted amount of \$224 million.¹⁵ Third, the General Accounting Office also recently reported that over the last ten years the Superfund Program has suffered a decline in funding of \$672 million, adjusted for inflation.¹⁶ These Subcommittee members further observed that even the \$300-\$800 million funding range does not account for adverse impacts caused by several years of what they see as under- funding of the Superfund Program.

^{vv} Subcommittee Member Vicky Peters does not agree that the description in the report accurately reflects the deliberations that took place. See Attachment A for Ms. Peters' individual statement and the individual statement of Aimee Houghton. Ms. Peters agrees with Ms. Houghton's views on this issue.

Other Subcommittee members were unwilling to support supplemental funding in this range, because they are not confident the funds that are currently appropriated are being spent in the most efficient and effective manner possible.^{ww} These members believe that far too much Superfund money is devoted to non-OSWER costs, cost-of-living increases for EPA staff, and program management. They also believe that far too little annual appropriations are devoted to extramural remedial action cleanup costs.^{xx} Given these concerns, they are reluctant to support any supplemental funding for the Superfund Program until after a neutral, independent audit to identify program efficiencies was completed and program efficiencies are implemented.^{yy} Some Subcommittee members believe that supplemental funding in the range of the \$150 million that the Administration has requested in the past two budget cycles, or the \$175 million range identified by the OIG as the FY 2003 funding shortfall, is not unreasonable.¹⁷

Where Should Funds be Spent

While all Subcommittee members recognized the importance and value of a strong enforcement program that targets all—not just some—responsible parties, encourages proactive efforts by cooperative responsible parties, and discourages recalcitrance, some members argued that if EPA were to receive supplemental funding for remedial actions at the backlog of sites, such funding should be limited to instances where the Agency has determined that there are no viable responsible parties. Subcommittee members who supported this approach believe that viable PRPs who can perform or pay for cleanup should do so, and that EPA already has sufficient tools to compel viable PRPs to perform or pay for necessary work under CERCLA. These members wanted to ensure that funding would be focused on the most serious funding needs, which they describe as “ready-to-go” extramural remedial costs at sites where, after diligent enforcement efforts, EPA has determined that no viable party could fund cleanup. They noted that EPA’s efforts to find money to pay for such cleanup costs have handicapped implementation of the Agency’s fairness administrative reforms at other sites, and that these reforms are important to a successful Program. For these reasons, these Subcommittee members were willing to support temporary supplemental funding, pending the results of an independent audit of Superfund expenditures, but only if such funding were limited to

^{ww} Subcommittee member Jim Derouin does not believe that this report includes recommendations that will lead to significant efficiencies in the operation of the Program and was, as a result, unwilling to support substantial new funding for the Program. See Attachment A for Mr. Derouin’s individual statement.

^{xx} Subcommittee member Jim Derouin believes that one efficiency problem facing EPA is that the Agency should direct, as a percentage of its budget, more funding to actual bricks and mortar remediation. See Attachment A for Mr. Derouin’s individual statement.

^{yy} Subcommittee member Richard Stewart also opposes funding increases at this time because he believes EPA continues to badly waste program resources by failing to target them on the most serious health and environmental risks. See Attachment A for Mr. Stewart’s individual statement.

extramural remedial actions (construction) at sites like New Bedford Harbor, where federal funding is necessary to pay for orphan shares.

Other Subcommittee members objected to limiting funding to instances where EPA has determined there are no viable responsible parties, believe that implementing this limitation would be difficult, if not impossible, would violate Congressional intent and common-sense by potentially forcing EPA to prioritize expenditures based on the absence of a viable PRP or forgo cost recovery actions against PRPs and entities associated with PRPs that the Agency is entitled to by the statute, thereby undermining the liability provisions of CRECLA, and would restrict EPA's discretion to make the decisions the Agency believes are necessary to protect human health and the environment. These Subcommittee members also rejected this constraint because they did not want political actors to apply this restriction to future program funding. These members believe EPA must have the flexibility to spend funds where the Agency believes they will best help address threats to public health and the environment, which may include increased funding for enforcement actions. Finally, they believe that the current funding shortfall has adversely impacted a host of actions necessary for cleaning up sites, including studies, listings, removals, and long-term clean-up activities, and that EPA should be allowed to fund all these activities with any resources made available.

Funding Source

The Subcommittee had very divergent views about the appropriate funding source for the Superfund Program, in particular, the excise taxes on sales of crude oil and petroleum products, and sales of certain chemicals and the environmental tax on corporations-----all of which lapsed at the end of 1995. Some Subcommittee members were very troubled by the expiration of these taxes, which they see as linked to what they believe is recent under funding of the Superfund Program and the cause of the backlog of remedial actions at NPL sites. Other members did not see such a link, observing that appropriations to the Superfund Program have risen and fallen over the past ten years independent of the taxes, as described in the recent GAO report on Superfund appropriations and expenditures.^{ZZ18}

^{ZZ} Subcommittee Member Vicky Peters supports neither this position nor this interpretation of the GAO report. See Attachment A for Ms. Peters' individual statement and for the individual statement of Grant Cope. Ms. Peters' agrees with Mr. Cope's views on this issue.

¹ Use of the generic term “EPA” is meant to address both headquarters and regional offices and to recognize that the EPA decision maker with respect to NPL listings is the Assistant Administrator for Solid Waste and Emergency Response.

² As used in this report, the term “NPL eligible” or “NPL-eligible site” means sites that score 28.5 or higher under EPA’s Hazard Ranking System or are otherwise eligible to be considered for the NPL, for example because of an Agency for Toxic Substances and Disease Registry health advisory. Not all NPL-eligible sites are proposed for listing on the NPL. The term “NPL candidate” or “NPL-candidate site” means that subset of NPL-eligible sites that EPA regional offices recommend that EPA headquarters propose for listing on the NPL.

³ As discussed more fully in later in this chapter, Subcommittee members had a range of views about the role of non-Superfund programs. Some Subcommittee members do not anticipate that many other cleanup programs will have access to the funding necessary to independently pay for cleanup at NPL-caliber sites. Other members believe that non-Superfund cleanup programs may, for certain sites, have access to useful resources.

⁴ As described earlier in this report, the formal Superfund site assessment process begins when EPA first enters information about a release or potential release into the CERCLIS data system and continues through preliminary site assessments, site inspections and other activities. The “Superfund site assessment” process ends either when EPA determines that no further remedial action is planned under CERCLA, at which point site assessment stops and site information is archived, or when EPA decides to propose a site for listing on the NPL, at which point the Superfund site assessment phase of the process ends and the listing process begins. Note that “Superfund site assessment process” is a term meant to describe activities that take place before EPA makes a decision about whether to propose a site for listing. At sites that EPA decides to propose for listing, assessment and evaluative activities (such as remedial investigations) continue.

⁵ EPA’s current guidance on PRP searches indicates that searches for remedial action sites should begin as soon as EPA determines that a site is “NPL-caliber” and that a long-term response is appropriate and calls for the search to be completed 90 days before the start of remedial design and remedial action (RD/RA) implementation. The RD/RA occurs long after a site is listed on the NPL. If PRPs are not identified until this time, it is much too late to allow them (particularly those who do not own the site in question) to participate in discussions about site investigations and remedy selection, or consider voluntarily undertaking site investigation and cleanup under a non-NPL program.

⁶ Information provided by EPA from eFACTS on October 16, 2003.

⁷ The Subcommittee recognizes that the Department of Defense also has responsibilities relative to removal actions under 40 CFR Part 300 Subpart B.

⁸ The Subcommittee did not carry out an assessment of the US Army Corps of Engineers’ programs, the Urban Rivers Restoration Initiative, or the Land Revitalization Agenda. Based on their individual experiences, some Subcommittee members were comfortable with these programs. Other Subcommittee members had serious concerns about these programs’ ability to appropriately clean up sites and concerns that using other programs’ funding models could erode Superfund’s liability standards.

⁹ The Subcommittee did not review the RCRA Deferral Policy or its outcomes in any detail. Based on their individual experiences, some Subcommittee members were comfortable with the concept of deferring to RCRA sites that are subject to RCRA corrective action authority. Other Subcommittee members had concerns about the ability of the RCRA program to achieve appropriate and timely cleanup outcomes at sites that might be deferred.

¹⁰ Environmental Law Institute, *An Analysis of State Superfund Programs: 50-State Study 2001 Update*, Washington D.C., November 2002.

¹¹ This guidance is also applied to decisions about certain removal actions. The Subcommittee did not debate and is not taking a position on priority setting for removal actions.

¹² EPA Inspector General, *Congressional Request on Funding Needs for Non-Federal Superfund Sites*, Rpt. 2004-P-00001 (Jan. 7, 2004).

¹³ Probst, Katherine N., Et al., *Superfund's Future: What Will It Cost?*, Washington D.C.: resources for the Future, 2001 pp. xxi-xxiv.

¹⁴ Ibid.

¹⁵ EPA Inspector General, *Congressional Request on Funding Needs for Non-Federal Superfund Sites*, Rpt. 2004-P-00001 (January 7, 2004); EPA, Memorandum from Elaine F. Davies to Superfund National Program Managers, OSWER 9275.1-04 (January 3, 2002).

¹⁶ GAO-04-475R Superfund Program, February 18, 2004.

¹⁷ EPA Inspector General, *Congressional Request on Funding Needs for Non-Federal Superfund Sites*, Rpt. 2004-P-00001 (January 7, 2004) p. 4.

¹⁸ GAO-04-475R Superfund Program, February 18, 2004.

IV. **Mega Sites**

The Subcommittee was specifically charged with considering and providing recommendations related to management of large, complex and costly cleanups, often referred to as mega sites. Subcommittee members had divergent views about the implications of mega sites for the Superfund Program. As a result, this chapter presents consensus recommendations and briefly describes Subcommittee members' contrasting views about what would be the best overall approach to resolving the difficult questions raised by very expensive cleanups.

Defining and Characterizing Mega Sites

As requested by EPA, the Subcommittee discussed how to delineate the mega site universe and generally agreed that a monetary limit can serve as a practical surrogate for complexity and other factors associated with especially expensive sites. The current \$50 million or higher mega site definition was seen by some members as an appropriate cutoff; others argued for a higher trigger, such as \$90–\$100 million or higher. In either case, Subcommittee members agreed that while a monetary definition can serve as a practical way to identify sites that merit special attention, a confluence of factors contributes to the complexity of a site, which in turn influence site costs. During its deliberations, the Subcommittee identified the following site factors or circumstances that may contribute to overall site complexity and cost:

- ➔ Large geographic area
- ➔ Scientific and technical complexity
- ➔ Administrative complexity
- ➔ High-risk waste management activities (e.g., recycling)
- ➔ Liability exemptions (e.g., recycling)
- ➔ Site type (e.g., mining)
- ➔ Media type (e.g., sediments)
- ➔ Specific issues in specific regions (e.g., sediments in EPA Region 10)
- ➔ Tribal and other communities where traditional or religious practices involve use of natural resources
- ➔ Multiple discrete sources of contamination
- ➔ Future risks
- ➔ Impacts on multiple communities
- ➔ Financial status and/or willing participation of potentially responsible parties (PRPs)

These factors were not considered definitive because they also may characterize less expensive sites. However, they can be particularly useful to help increase the EPA's awareness and understanding of the complexity associated with mega sites. In trying to better understand the mega site issue and characteristics other than cost that define these expensive sites, the Subcommittee found that the lack of reliable data on and analysis of these expensive sites impeded its ability to confidently establish a clear definition of a mega site and the challenges associated with them. The corresponding assumption was that if the data presented to the Subcommittee were inadequate, then the data must also be inadequate for the Agency. These data challenges were interpreted as a significant hurdle to developing a clear understanding of mega site issues and the management options for addressing them effectively in the future.

It is critical that EPA build its capacity to understand and manage these parameters of complexity in the most effective and efficient ways possible to improve the speed and efficiency of cleanups at mega sites. Once a site is designated as a mega site (regardless of what monetary definition is used), it is very important that the EPA be able to marshal the appropriate expertise and management experience to determine how to best address the risks posed by the site.

In response to the Agency's charge, members of the Subcommittee worked to identify important issues related to mega sites, considered in depth the difficult policy questions raised by mega sites, and explored various broad policy-level options for the management of large, complex, and costly sites. Some of the difficult questions the members raised included:

- ➔ Assuming funding constraints are affecting Fund-lead sites, should fewer sites be cleaned up more thoroughly, or should the Agency focus on reducing immediate threats only, allowing more sites to be addressed?
- ➔ Should the most expensive sites be left off of the NPL? Should some subset be left off?
- ➔ If the Superfund Program does not address some or all mega sites or portions of mega sites, where would they be addressed? What existing programs have the funding, resources, and experience to deal with sites of this magnitude? What are the ensuing implications (e.g., appropriations, liability)? What programs are available that will adequately protect human health and the environment and effectively involve affected communities at these sites?
- ➔ Would the law allow EPA to treat these sites differently simply because they are expensive? What if they are large, complex, and expensive?
- ➔ Should expenditures at mega sites be prioritized so that funds are dedicated to portions of such sites that pose the greatest threats?^A

^A Subcommittee member Jim Derouin believes that EPA should have the flexibility to evaluate risks/exposures presented by portions of mega sites, rather than being bound to assume that, once a mega site is listed, all portions of such a site must be treated as posing an equal risk. He feels that, without such flexibility, EPA cannot efficiently direct funding to the sites, or portions of sites, that pose the most risk at any given point in time. See Attachment A for Mr. Derouin's individual statement.

- ➔ Does the expenditure of funds at a mega site mean that the site as a whole has a priority claim on future funding, even though other sites may pose a greater threat of exposure?^B
- ➔ Should EPA receive increased funding to address these sites?
- ➔ Do these sites have impacts on communities (particularly Tribal and Environmental Justice communities) that should be considered?

Deliberations and Recommendations on Management of Mega Sites

The Subcommittee was unable to reach agreement on a preferred comprehensive approach for dealing with mega sites. Due to the wide diversity of stakeholders on the Subcommittee, the views regarding the overall manner in which mega sites should be managed differed fundamentally. Individual Subcommittee member's views are described in the individual papers included in [a reference will be made to any Subcommittee position papers addressing mega site issues in Attachment A]. The Subcommittee extensively discussed the management recommendations in this section, but did not reach consensus on all of them. The members believe the following discussion of the issues can help improve how EPA addresses mega sites. In addition, some members believe that implementation of these recommendations alone will not satisfactorily address the need to manage mega sites more effectively, given existing financial realities.

In the context of the wide range of views about an overall approach to mega sites, the Subcommittee discussed a number of potential recommendations on applying special management consideration and attention to these sites. The Subcommittee makes one consensus recommendation on management of mega sites. Recommendation 9 advises EPA to bring focused and sustained management attention to mega sites, and gives a number of examples of the types of attention that would be most useful. In addition, the Subcommittee considered but did not reach consensus on (1) a recommendation that EPA consider an expanded site inspection/remedial investigation for potential mega sites, and (2) a recommendation that EPA consider a specific set of factors when deciding, consistent with Recommendation 3 on involvement of stakeholders in the listing process, how to address large geographic areas with multiple contaminant sources. These deliberations are described below.

The Subcommittee reiterates its expectation that its deliberations and recommendations on listing and management of NPL sites, described in Chapter III, will be applied with increased attention and rigor to mega sites and potential mega sites. In particular,

^B Subcommittee member Jim Derouin believes that EPA should have the flexibility to evaluate risks/exposures presented by portions of mega sites rather than being bound to assume that, once a mega site is listed, all portions of such a site must be treated as posing an equal risk. He feels that, without such flexibility, EPA cannot efficiently direct funding to the sites, or portions of sites, that pose the most risk at any given point in time. See Attachment A for Mr. Derouin's individual statement.

Recommendation 3 addresses the importance of outreach to and involvement of affected communities, PRPs, and others early in the site assessment process (i.e., well before a listing decision is made). In Chapter V, the Subcommittee makes recommendations about additional measures of program progress that will accurately reflect interim progress made at all sites, which may be especially useful for large, complex sites.



Recommendation 9: EPA should establish practices that result in mega sites receiving the necessary resources and attention from senior Agency managers.

While all Superfund sites present management challenges, mega sites, by definition, present complexities and investments that are at a greater scale, and thus deserve special management attention. In the private sector, very expensive projects are commonly governed by special forms of project management and receive greater attention from management. Because mega sites tend to remain on the NPL for long periods of time and their high costs can have important impacts on the Superfund budget and the economy, EPA should apply the following special management techniques to mega sites.

First, the Agency should ensure that the project managers assigned to mega sites have the appropriate experience and expertise to manage that type and level of project. The challenges associated with managing a large, complex, expensive, multi-year project are significant, and the Agency should strive to assign and retain its most talented project managers to and on these sites. More experienced remedial project managers, particularly those with successful experiences managing other large complex sites, may be best suited to meet such challenges. These seasoned staff should be familiar with similarly complex sites around the country or region, and should have experience implementing cost-effective, reliable approaches and construction management strategies. This depth of experience is important for a large, complex site, where a newer less experienced project manager might be more hesitant to make decisions, more easily overwhelmed, or more likely to make errors in judgment. Some of the most important skills for mega site project managers are construction and other management skills – such as the ability to balance competing factors, negotiate agreements, and make decisions. While also important, the technical, financial, and other types of expertise needed can be provided by other professionals who support the project manager.

In addition, when making decisions about changing or reassigning mega site project managers, EPA should consider the benefits that are typically associated with stability in the project manager assignment. A number of Subcommittee members have experienced a situation where there have been multiple consecutive project managers at a single site in a short period of time. These changes can cause delays in cleanup, as new project managers must become familiar with the site history, stakeholders, and cleanup approaches. The more complex a site, the steeper this learning curve. Thus,

EPA should explore creative personnel approaches to attract and retain the best and brightest project managers to mega sites and to reward their superior service.

Second, EPA should provide project managers with the support systems that they need. Mega site project managers need access to specialized expertise to assist them in overseeing a complex, expensive, multi-year cleanup. In particular, experts in technical disciplines relevant to the site in question and experts in such practices as cost engineering and multi-year funding are needed. The Subcommittee emphasizes the potential usefulness of cost engineering, a practice commonly used in the private sector and by other government agencies, including the Department of Energy. The focus of cost engineering is use of the right tools, systems, and training to develop credible cost estimates and life-cycle costs to assist in decision making for large, complex projects. Benefits can include increased accuracy of costs estimates, improved accountability, and improved management.

Third, the Agency must apply sustained upper management attention to large, complex, and expensive sites. These sites have the potential to consume a large amount of human, as well as financial, resources. It is important to keep strong management attention focused on them to ensure that cleanup occurs at a predictable and steady pace. The Office of Solid Waste's pre-SARA (Superfund Amendments and Reauthorization Act) site review is a step in the right direction by attempting to focus on the difficult problem of completing cleanups at sites (many of them mega sites) listed before 1986. However, more work and greater involvement by upper management is needed to map out effective management strategies.

Finally, EPA should create specific centers of excellence within the Agency and, where appropriate, call on experts outside the Agency. These centers should connect individuals who possess an understanding of some of the common characteristics of expensive sites, such as sediment issues or issues related to sites located in Tribal or other communities where traditional practices involve use of natural resources. Centers of excellence should be clearinghouses for information on successful approaches to addressing such complexities and lessons learned, so that project managers of sites with these characteristics can learn from and support one another.

While the Subcommittee agreed that mega sites should be given focused and sustained management attention, it did not reach consensus on whether mega sites should be subject to different technical processes or cleanup standards. Some Subcommittee members believe that, because of the high costs of mega sites and the practical limitations on both government and private funding, different approaches for mega sites are warranted and should be discussed in an open and public process.^C Other members strongly opposed to this view, stressing that care should be taken not to interpret this recommendation as a call for a different technical process or for different cleanup standards for mega sites. These members believe that mega sites require the same attention and should be cleaned up to the same standards as all other NPL sites.

^C Subcommittee member Richard Stewart supports this view. See Attachment A for Mr. Stewart's individual statement.

▀ Deliberations on Expanded Site Inspections/Remedial Investigations at Large, Complex Sites

The Subcommittee considered but did not reach consensus on a recommendation that EPA should consider whether to carry out an expanded site inspection/remedial investigation (ESI/RI) early in the Superfund site assessment process at large, complex sites. As described by current EPA guidance, an ESI/RI may be used to gather site characterization data common to SI and RI activities in one step, thereby expediting the later collection of data when comprehensive RI activities are performed. ESI/RIs facilitate, but do not replace additional investigations that may occur if a site is listed.

Subcommittee members who supported this recommendation thought that an ESI/RI could be used to:

- ➔ Identify site-specific data that are available and reliable, and that can be used during HRS scoring, as described more fully in Recommendation 4.
- ➔ Gather information on sources and distribution of contamination to inform listing decisions and post-listing site management.
- ➔ Gather information on and reach out to other programs that may have independent missions or activities that could have a positive or negative effect on the Superfund cleanup, and develop plans to avoid negative effects and capitalize on potential positive effects, such as opportunities to leverage funding.
- ➔ Aid EPA in setting priorities after site listing.

These Subcommittee members argued that, given the level of commitment needed for large, complex sites, it is particularly important that an understanding of actual site-specific conditions, rather than default assumptions, drive decision making. These members believe that additional up-front investments in ESI/RIs may pay important dividends in helping EPA determine how to best address potential mega sites. In addition, some Subcommittee members who supported an ESI/RI for all large, complex sites observed that it would provide information the Agency could use to decide how to best address the large area in the first instance.^{DE} This is discussed more fully in the next section, which describes the Subcommittee's range of views about how EPA should address large geographic areas.

^D Subcommittee member Tom Newlon supports the ESI/RI concept and approach for large, complex areas of discontinuous contamination from multiple sources, based on his view that more effective evaluation of potential approaches to these large areas is needed to ensure that the most efficient and effective approach is put in place. See Attachment A for Mr. Newlon's individual statement.

^E Subcommittee member Richard Stewart supports supports the ESI/RI concept and approach for large, complex sites. See Attachment A for Mr. Stewart's individual statement.

Other Subcommittee members do not believe EPA should automatically consider an ESI/RI at every large, complex site. They argued that EPA's decision to conduct an ESI/RI should depend upon site-specific circumstances. In some circumstances, such as where site conditions, releases, and potential releases are well understood, carrying out an ESI/RI could needlessly increase up-front costs and delay cleanups. In other circumstances, such as where data on site conditions, releases, and potential releases are not comprehensive, reliable, or up-to-date, an ESI/RI might make sense regardless of site size or complexity. In addition, some Subcommittee members who did not support consideration of an ESI/RI at every large, complex site were uncomfortable with some of the potential uses of an ESI/RI described above, particularly that an ESI/RI might serve to encourage use of non-Superfund programs that might not meet or exceed Superfund standards.

Subcommittee members who were not willing to support a recommendation that EPA should consider an ESI/RI for every large complex site were willing to support a recommendation that EPA should consider whether an ESI/RI is needed as part of the outreach to and involvement of affected communities, PRPs, and other stakeholders early in the Superfund site assessment process, as described in Recommendation 3.

Deliberations on Addressing Large Geographic Areas with Multiple Contaminant Sources

The Subcommittee considered but did not reach consensus on a recommendation advising that, when considering how to best address large geographic areas with multiple sources of contamination, EPA should evaluate a variety of potential approaches and should consider factors related to how these approaches would affect the efficacy, efficiency, and timeliness of the overall cleanup process.

When EPA makes a decision to pursue an NPL listing, it describes the releases to be listed. Decisions about what constitutes the “site” for purposes of listing may be difficult when EPA is evaluating large geographic areas with multiple sources of contamination. This may be the case especially where contamination is discontinuously distributed, with large areas of relatively low-level contamination between “hotspots,” or where multiple, geographically distinct, unrelated sources of contamination are present. The number of such sites currently on the NPL may be very small and, based on some Subcommittee members' individual experiences, appear to be largely aquatic sites that cover entire urban bays and industrial waterways or watershed areas. However, also based on some Subcommittee members' individual experiences, cleanup and process-related costs at these sites can be high, as can be the risk of protracted remediation timelines.

There was a range of views on the Subcommittee about whether EPA has in the past appropriately made decisions about listing large geographic areas, and how EPA should evaluate these areas in the future. Some Subcommittee members believe EPA does not look closely enough at the potential value of addressing large geographic areas through

focused attention on smaller units tied to individual releases or clusters of releases. They believe that when evaluating large geographic areas, EPA should consider alternatives to a single NPL listing, such as (1) listing one or more smaller areas as separate NPL sites tied to specific sources of contamination or responsible parties, (2) addressing portions of an area through removal actions or adequate federal or state non-Superfund programs instead of an NPL listing, or (3) some combination of these approaches. These Subcommittee members further believe that a single NPL listing—or perhaps any NPL listing—is not the best approach to addressing areas where contamination is discontinuously distributed so that there are large areas of relatively low-level contamination between hotspots, or where multiple, geographically distinct, unrelated sources of contamination are present frequently.^F They think EPA should use the increased early involvement of stakeholders described in Recommendation 3 and an ESI/RI (discussed above) to gather information and input to guide its decision making on how to best address individual large geographic areas.^G

Other Subcommittee members strongly disagree with this view, believing that EPA has at times been too narrow in its definition of the “site” when considering a large geographic area. These members believe it is inappropriate for EPA to list only a small subsection of a large geographic area, and prefer that EPA list entire contaminated areas and then, if appropriate, divide the sites into operable units after listing. These members argued that listing only a small portion of a large geographic area could: (1) make it more difficult to list other contaminated portions of the same area in the future; (2) hamper EPA’s exercise of its authority to ensure that the entire geographic area is cleaned up; and (3) increase the likelihood that portions of the area would be left unaddressed, potentially forever.

The Subcommittee also considered but did not reach consensus on a set of factors and questions that EPA might consider when evaluating large geographic areas with multiple, discrete contamination sources.

Some Subcommittee members supported the following set of factors:

- ➔ Is the overall cleanup likely to be improved or expedited by listing the large geographic areas as a single NPL site or through some other approach? EPA should consider the potential for various listing strategies to affect the difficulty of negotiations, the length of time before cleanup can start, process-related costs, and the time frame in which cleanup will ultimately be achieved.
- ➔ What is the best way to manage the anticipated total transaction costs associated with evaluation and cleanup of the area? On the one hand, addressing a large geographic area in terms of smaller units—either by separate

^F Subcommittee member Tom Newlon supports this position which he believes is an essential component of a package of reforms that is needed to help EPA more effectively and efficiently address potential mega sites. See Attachment A for Mr. Newlon’s individual statement.

^G Subcommittee member Richard Stewart supports these views. See Attachment A for Mr. Stewart’s individual statement.

NPL listings or by application of other programs as discussed above—may simplify and streamline investigations and cleanups, reduce transaction costs by avoiding diseconomies of scale, and allow remedies or portions of remedies to be identified and implemented sooner. On the other hand, there may be economies of scale, improved understanding of the inter-relationships of the technical and legal aspects of the site, consistency gains, and more integrated and efficient analysis that could be realized by listing a large geographic area as a single NPL site.

- ➔ Will areas not included in an NPL “site” at listing be adequately addressed? EPA should consider the potential for various listing strategies to leave areas of contamination stranded and unlikely to be adequately addressed, as well as the potential for non-Superfund programs to adequately address areas that are not part of an NPL listing.
- ➔ Listing one large geographic area provides communities with a unified basis for participation in the evaluation and cleanup of all the contaminant hotspots in an area. Listing the entire area also brings into play the public involvement advantages that come with a Superfund listing, including technical assistance grants to communities. These factors should be weighed along with potential efficiency gains (and simplicity for the community) from more directly addressing individual hotspots and clusters of hotspots within the area.
- ➔ EPA should consider whether sources of contamination, although disparate, are integrated in human or environmental receptors and how that integration, if it occurs, would best be addressed.
- ➔ EPA should consider whether hotspots or contaminants in a large geographic area are likely to shift, particularly in dynamic aquatic systems, and how to best address that possibility.
- ➔ EPA should consider whether addressing a large geographic area as one site versus in multiple smaller units or through other means would allow for easier administration by EPA, states, and Tribal Nations, or would make such administration more difficult and create more or less impact on the resources of regulatory agencies.

Other Subcommittee members did not support these factors. They strongly opposed EPA’s listing only a small portion of a large geographic area (as described in the discussion of the Subcommittee’s range of views on this issue, above), and/or had concerns regarding one or more of the individual factors. In particular, some Subcommittee members opposed any consideration of negotiation and other process-related or transaction costs, arguing that such considerations inappropriately benefit PRPs, not the Superfund Program or the general public. Some of these members were concerned that the factors allow for inappropriate consideration of non-Superfund programs that might not meet or exceed Superfund’s standards (see discussion of the role of other programs in Chapter III), or were concerned that the factors do not adequately consider the potential that portions of large geographic areas not listed on the NPL may go unaddressed and remain contaminated indefinitely.

V. Measuring Program Progress

The Subcommittee was asked to provide feedback on EPA's continuing efforts to develop measures of Program progress. The Subcommittee supplied such feedback primarily through a work group established for that purpose. In addition, the Subcommittee is proactively suggesting additional measures and related activities for EPA's consideration. The Subcommittee's recommendations address how the Program can improve its measurement and communication of performance on both national and site-specific levels.

These ideas are presented as recommendations and guidelines for implementation and policy consideration. Although the Subcommittee members had divergent views about what should be measured, how the Program should be measured and for what purpose, a number of recommendations achieved consensus. This chapter (1) provides background and context for the Subcommittee's deliberations about measuring the progress of the Superfund Program; (2) presents a primary set of goals upon which to measure the overall Program at a national level; (3) describes additional measures of progress that can be used to indicate how the Program is working based on compilations of data for each National Priorities List (NPL) site; and (4) suggests an approach to measure the success of EPA's coordination with state and local governments, Tribal Nations and communities, and provides further recommendations for integrating such coordination meaningfully into the functioning of the Program.

Background and Context

The discussion of measuring the progress of the Superfund Program needs to be linked to the purpose and goals of the Program. In 1980, Congress passed the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) to increase federal authority to respond to releases or threatened releases of hazardous substances that may endanger public health or welfare and the environment. Thus, it is clear that measurements of the Superfund Program's progress should include metrics that assess the extent to which EPA has responded to those releases. In addition, as requested by the EPA Administrator, the question of Program performance also was evaluated. Comments on measures that can be considered to identify both the performance and the progress of the Superfund Program are included in this chapter.

■ Using Construction Completions to Measure Progress

Over approximately the past eight years,¹ the key measure of progress used by EPA for sites on the National Priorities List (NPL) has been the number of *construction completions* by site each year. EPA defines construction completion as “a benchmark used to show that all significant construction activity has been completed, even though additional remediation may be needed for all cleanup goals to be met.”²

The date a site reaches construction completion provides an indication of interim progress toward meeting the primary cleanup goals of the Program. This date is an important indicator for public reporting because it is straightforward and objectively verifiable. It remains a primary concern of affected communities, provides an indication of progress toward meeting the basic cleanup goals of the Program, and reflects a significant budgetary milestone since remedial construction tends to be the most expensive component of cleanup.

Nevertheless, focusing solely on construction completion to gauge Program progress has limitations. For example, it reflects the outcome of the construction phase and not the interim accomplishments i.e., site investigation, risk assessment, remedy selection, and interim response actions. Additionally, construction completion does not necessarily reflect threat(s) that a site may continue to pose to humans and the environment after construction. Thus, it fails to capture meaningful progress at different stages of cleanup.

Finally, reporting based solely on the number of construction completions does not indicate the size, complexity and cost of the respective sites, rendering a half-million-dollar site cleanup indistinguishable from a half-billion-dollar site cleanup. This issue was raised by the Subcommittee in particular with respect to mega sites, which can take many years to clean up, have multiple operating units (OUs), and require tens or hundreds of millions of dollars to complete construction.

Figure V-1,³ which summarizes the number of construction completions at sites by year, indicates that the annual rate of construction completions has varied over time. However, the Agency explained to the Subcommittee that the spikes and dips in the figure do not correspond to shifts in the Superfund Program’s overall level of effort or spending.^{4A} The 1991-92 increase from 12 to 88 construction completions is considered an artifact of an administrative and accounting function.⁵ As a result of its formalization of an official definition of the term *construction completion*, the Agency was able to identify many cases where a relatively small amount of work would complete the major site construction effort. This resulted in EPA’s counting these sites as construction completions. Approximately the same rate of construction completions was maintained from 1992 to 2000.

^A Subcommittee member Vicky Peters does not support this interpretation of the data. See Attachment A for Ms. Peters’ individual statement and for the individual statement of Grant Cope, which addresses this issue.

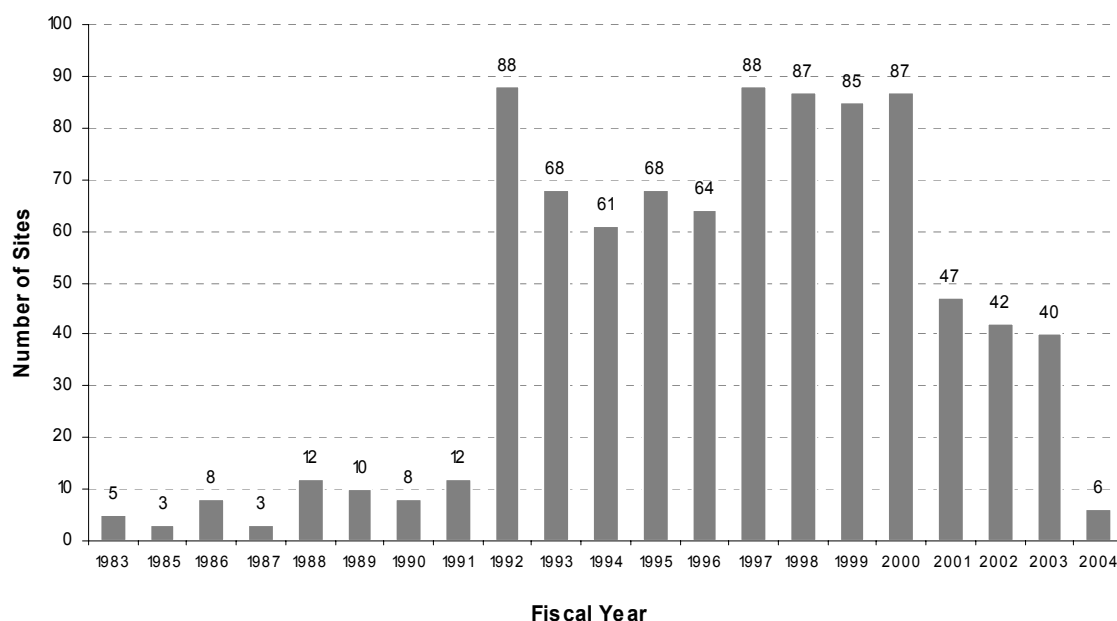


Figure V-1: Superfund Construction Completions by Fiscal Year

Focusing on Measures to Complement and Strengthen Construction Completions

The Subcommittee focused on how the Superfund Program can improve the way it captures and communicates progress on both national and site-specific levels by exploring measures that would supplement construction completion and would more comprehensively reflect significant milestones in protecting human health and the environment at Superfund sites. In doing so, the Subcommittee members provided individual feedback to the Agency on their efforts to develop additional measures of progress as applied to NPL sites through a work group discussion and the documentation of individual comments.

The Subcommittee supports the Agency's attempts to improve and better communicate measures of program progress and is aware of the pressure the agency is under to quantify reductions in human health and environmental risks similar to measures in the Clean Air and Clean Water programs. While the Subcommittee members grappled with this issue, they were unable to reach consensus on a meaningful, simple, objective measure of risk reduction. Additionally, the Subcommittee did not discuss whether such pressure from other programs is appropriate or whether such measures are valuable. Superfund's site-specific nature and complexity make the development and applicability of such direct measures of improvement to human health and the environment extremely difficult.

■ Understanding the Significance of Various Types of Measures

The Subcommittee discussed the significance of the many possible types of measures of progress for the Superfund Program. For example, there are measures that relate to cleanup progress (e.g. reducing hazards); overall Program performance (e.g. efficient use of resources); and Program management (e.g. coordination with the public, Tribal Nations, and state and local governments). Different measures make sense for different purposes. A measure of progress should be meaningful to EPA and state program managers, members of Congress, regulators, stakeholders, and other parties using that measure. Performance measures for the Superfund Program should inform the decision making process and help those responsible for and affected by the Program make better decisions on site-specific, regional, and national levels.

The Subcommittee discussed the importance of applying measures to the Superfund Program that would address critical aspects of a well-functioning and effective federal program. The goals of such measures include: (1) budget transparency—how dollars are being used in the Superfund Program, and (2) general Program tracking—ensuring that needed information about the Program is reliable and readily accessible. Current EPA data systems do not adequately or accurately capture a number of important areas, such as site activities, site risks, contamination, costs (to EPA, potentially responsible parties (PRPs), and states), and remedy effectiveness. Suggestions about data and Program tracking are also discussed in Chapter III of this report, with respect to the development of an annual report.

The Subcommittee discussed the value of qualitative and quantitative measures. Historically, government reporting of progress in various programs has been biased in favor of quantitative measures because they are perceived as easier to track and report. Critics claim this tendency for “bean counting” offers clear numbers, but these numbers do not accurately represent the progress of a complex program such as the Superfund Program. Others claim that counting the completion of discrete phases of the investigation and cleanup process accurately reflects the Program’s progress toward achieving its goal of cleaning up sites. The Subcommittee discussed the value of qualitative measures to better understand and set the context for quantitative measures that may be applicable to the Superfund Program. The Subcommittee also recognized that the Agency is in the process of developing more sophisticated means of collecting quantitative and qualitative data about the Program that in combination would allow for more comprehensive reporting.

In the Subcommittee discussions, some members noted the respective value of and need for both outcome and output measures to address the performance of the Superfund Program. *Outcomes* are an assessment of the results of a program activity compared to its intended purpose. *Outputs* are a tabulation, calculation, or recording of activity or effort undertaken to implement the authorizing statute. *Performance measures* may address the type or level of program activities conducted (process), the direct products and services delivered by the program (outputs), and/or the results of those products or

services - such as improvements to the environment or decreased threats to human health (outcomes). There is an effort throughout the federal government to move away from outputs that measure “things” in favor of outcome measures that reflect a relative direction or accomplishment. However, some Subcommittee members believe that both outcome and output measures of performance are necessary to comprehensively track progress at Superfund sites and, on a national level, within the Superfund Program. Furthermore, some members believe that the success of the Program can be adequately demonstrated by evidence that releases are being addressed pursuant to the statute, and that efforts to create other measures, gather additional data, and compile and report such data in a meaningful way could unnecessarily divert scarce resources from cleaning up sites.

The Subcommittee also discussed the secondary impacts that will result from the institutionalization of any measures of performance. In addition to the explicit and primary goal of accounting for the accomplishments of the Program, progress measures drive both behavior and expectations. Therefore, it is important to consider the positive as well as the potentially unintended negative behavior modification that may result from the implementation of a specific performance measure. For example, reporting construction completions as a percentage of the number of current NPL sites, rather than as a total number, may create a disincentive to list new sites. Finally, it is important to consider the influence that measures will have on the expectations and resulting degree of satisfaction of interested parties, including communities, Congress, EPA managers, and the general public.

The Subcommittee emphasized the need to be clear about the purpose of any measure of progress and to carefully consider the type of measure that best addresses that purpose. In this chapter of the report, the Subcommittee has attempted to address a variety of types of measures and to clearly articulate its opinion of the appropriate use of those measures. However, the Subcommittee recognizes that developing suitable measures of progress is complex, and that such measures will most effectively evolve over time through an iterative process. The following recommendations are not intended to be prescriptive. Ultimately EPA will need to make decisions about the appropriate application of these measures and will need to monitor whether they work as intended and modify them if they do not.

Terminology

Throughout this section of the report, the term *measure* is used to define factors associated with the progress of the Superfund Program. Depending on the intended use, these measures may need to be translated into specific goals, objectives, sub-objectives, or targets (for whose development guidance exists). For the purpose of this report, the Subcommittee has focused its recommendations on measures, and will rely on the Agency to translate the suggested measures as appropriate for the purpose of tracking and reporting progress in terms that meaningfully reflect the accomplishments of the Program.

▀ Types of Measures Framing the Subcommittee's Recommendations

The Subcommittee framed its recommendations for measuring Superfund Program progress around three types of measures.

National priority measures are “macro” measures of the Program’s progress at the national level. They are overall Program-level accomplishments for which goals, objectives and numeric targets could be set and for which consequences could flow based on whether the targets are met. Sample consequences of relevance might be how senior managers in the Program are evaluated, how funding is allocated within the Program, and what appropriations are provided to the Program.

Measures of Program progress are also measurable indicators of the Program’s progress, but they may not be appropriate as “external targets” against which Congress or oversight agencies would pass official judgment on the Program’s performance. These additional measures of performance derived from site-specific performance profiles can be used to inform decision making, and to document significant milestones at a variety of levels. They also can be packaged in a variety of ways to meet the needs of the intended audience. Such additional measures can be reported at the national, regional, state or congressional district, and site levels.

Measures of coordination and collaboration have been addressed by the Subcommittee in this report to highlight a set of critical Program measures that have historically received inadequate attention. These are management-level measures that reflect important elements of a successful project, and when rolled up to include multiple sites, might be able to be used to reflect the Program’s progress at a national level. The Subcommittee has focused on measures associated with how the affected Tribal Nations, communities, and state and local institutions are integrated into the decision-making process, and the degree to which their participation in the decision-making process has been meaningful. Generally, these measures have been difficult to quantify. The goal of focusing on them was to underscore the need to integrate these critical elements into the measurement of the Program’s progress so as to encourage implementation of the Agency’s guidance.

Recommended National Priority Measures

The Superfund Program is required to report its progress to Congress, the Office of Management and Budget, and a variety of external stakeholders for a variety of purposes. EPA’s measures need to be simple, meaningful, and brief. To meaningfully represent the Program, national measures should address both exposure reduction and pipeline progress.

The Subcommittee recommends the following primary national measures that, in combination, reflect the significant elements of the Program's progress and accomplishments.

Recommendation 10: EPA should apply the following National Priority Measures to its national-level reporting requirements:



- ➔ Number of sites with all final remedies selected,
- ➔ Number of construction completions at the site level,
- ➔ Percentage of construction completions at the operable unit level, and
- ➔ Number of sites deleted from the NPL.

The Agency is already reporting the number of final remedies selected and the number of construction completions at the site level. The Subcommittee supports the continued use of these measures.

The Subcommittee feels that deletions of sites from the NPL are reasonable, appropriate, and important to add to the list of primary measures. Deletion from the NPL is the only measure that reflects that all unacceptable risks from a site have been eliminated, and no further expenditures beyond operation, maintenance, and monitoring are expected.

While acknowledging some concerns about this approach, the Subcommittee recommends reporting the percentage of construction completions at the operable unit (OU) level as a national measure. The Subcommittee recognizes that the definition and characteristics of OUs differ among sites. Some sites have a few very complex OUs and some have many and less-complex OUs. Most Subcommittee members felt that reporting this measure as a percentage of total OUs, and by including site construction completions and sites with all final remedies selected as additional measures, could fairly reflect a useful increment of progress being made at a sub-site level, without creating an incentive to unnecessarily subdivide sites. Accounting for the Program's progress at a sub-site level was particularly relevant to the discussion of mega sites, where complex and costly sites taking years or decades to complete might have interim milestones that reflect national-level priority measures or progress. However, some members are concerned that EPA will create small OUs that can be cleaned up relatively quickly so that the Agency can inflate the percentage of OU constructions complete to satisfy Program progress goals. EPA should continue to define OUs based on site-specific factors and conditions.

The Subcommittee also discussed the two Resource Conservation and Recovery Act (RCRA) measures that are currently being used by the Agency to report RCRA program progress at the national level: (1) the number of sites with human exposure under control (from land and/or groundwater contamination), and (2) the number of sites with

contaminated groundwater migration under control. The Superfund Program is also using these measures to track progress at the national level. However, the Subcommittee raised a variety of concerns regarding why they were not appropriate for tracking the Superfund Program as national priority measures. Subcommittee members, therefore, did not agree that these were appropriate measures of progress for the Superfund Program. Additional details on the range of views among Subcommittee members regarding the use of RCRA measures for the Superfund Program are included in Appendix VI.

Additional Considerations

Recommendation 10 is intended for reporting on NPL sites only, because the Subcommittee believes it is inappropriate to integrate data from sites being cleaned up under other programs or strategies, even if Superfund dollars are spent. In particular, members were concerned about reporting Superfund Alternative Sites (SAS) as equal to those on the NPL. Additional details regarding the Subcommittee's perspectives on the SAS are included in Chapter VI.

The Subcommittee discussed how to reflect "reopened" remedies in measures of performance. Remedies can be reopened for a number of reasons, such as remedy failure due to error in judgment or insufficient data, failure of innovative technologies to achieve performance standards, or discovery of new, more cost effective technology. While tracking inadequate remedies could provide important lessons for the Program, members did not want to discourage the use of innovative technologies, or provide disincentives to reopening any remedies that warranted it. Therefore, members did not agree to include a separate national priority measure to capture the number of sites where remedies had been reopened. However, the running tally of national measures must be corrected to reflect the actual conditions at each site. For example, if in a given year EPA completes construction at 40 sites, but selects new technologies to address problems at three sites previously considered complete, the Agency would report 40 construction completions for that year. The cumulative numbers of construction completions recorded for the respective prior year periods, however, should be adjusted in the annual report, thereby reflecting the fact that additional construction work would be conducted at sites previously considered complete.

The Subcommittee considered the reduction of threats to the environment an important goal of the Superfund Program and discussed many options for possible national priority measures of progress toward that goal. Members recognized that determining progress toward this Program goal is an extremely complex undertaking, but could not agree on how to measure it and ultimately chose not to include it in their recommendation. The Subcommittee did agree that if an appropriate CERCLA-specific ecological measure could be developed, it should be included as a national priority measure. The Subcommittee supports the Agency's continued efforts to develop effective indicators of progress toward protecting sensitive environments.

Some sites are much more complicated than others. Accounting equally for very large complex and costly sites as for small and straightforward sites may cause difficulties.

One option suggested by the Subcommittee was to note progress on mega sites differently from progress on other sites in order to more accurately reflect the significance of those accomplishments and acknowledge that mega sites are expected to take longer to investigate, develop remedial options for, and ultimately clean up.^B However, EPA should continue to provide incentives to expeditiously complete cleanup activities at these sites.

Measures of Program Progress

The Agency has been developing improved performance measures in parallel with the work of the Subcommittee. EPA's development of the Performance Profile (June 2003) reflected much of the feedback received previously from Subcommittee members. A mock-up of EPA's working draft of the Performance Profile is included in Appendix V. The Performance Profile is consistent with the recommendations throughout this report, particularly those addressing transparency, communication with communities, Tribal Nations and states, and annual reporting.

The following material addresses a variety of types of measures identified to provide feedback to the Agency on how to more comprehensively document and report the accomplishments of the Program. As such, they are intended to:

- ➔ Inform decision making,
- ➔ Track and report progress at a variety of Program levels,
- ➔ Increase comprehensive budget transparency,
- ➔ Document the achievement of significant milestones,
- ➔ Communicate the accomplishments and effectiveness of the Program to a variety of audiences, and
- ➔ Create incentives for positive behaviors.

Some measures reflect hazard reduction, some reflect standards for good Program management, some reflect pipeline performance, and some help to characterize the site. This input is provided with the important caveat that many members of the Subcommittee believe the Agency's efforts to measure and report progress should not divert significant resources away from actual cleanup in the field.

The measures discussed in this section could be reported in a variety of ways for a multitude of intended purposes and audiences. During its deliberations, the Subcommittee referred to the national and site-level Performance Profile as an example of one way EPA could package data. Other formats were also considered by the Subcommittee.

^B Subcommittee member Vicky Peters supported this perspective if the same measures are used for mega sites as for other sites. These could then be compiled and tracked separately for mega sites. See Attachment A for Ms. Peters' individual statement.

The Subcommittee believes that developing and systematically reporting against a core set of measures is critical to both accurately portray the progress of the Program and communicate that progress to intended audiences. The Subcommittee therefore makes the following recommendation:



Recommendation 11: EPA should continue with its efforts to develop and implement a system to ensure clear, transparent dissemination of a core set of data for all NPL sites and Superfund Program activities.

The Subcommittee believes that the Agency should focus on ensuring accurate reporting on a core set of data for all NPL sites. In the future, as the capacity of the Program's tracking system increases, it should be expanded to include other sites receiving Superfund funding. Some Subcommittee members also believe that such a system could be used to effectively track sites that have been identified as potential NPL candidates. However, the Agency should distinguish the reporting of NPL sites from non-NPL sites. For example, data associated with Superfund Alternative Site cleanups and cleanups being implemented under other cleanup programs should be distinguished from NPL site data.

The Subcommittee recognizes the complexity of effectively developing, tracking and reporting measures. The Agency should implement the efforts underway immediately as part of an iterative process that includes mechanisms for making improvements as needed in the future. For example, measures could undergo pilot testing and peer review by knowledgeable individuals and organizations prior to widespread adoption. Additionally, the Subcommittee recommends the Agency extrapolate the site-specific results to reflect regional and national progress and report the results annually so the information can reflect incremental improvements. Additional details on the Subcommittee's recommendation on annual reporting are included in Chapter III, Recommendation 5.

Many Subcommittee members emphasized the value of limiting the data set to the most meaningful information and only to information that can be reported in an easily readable format. However, Agency staff explained that the suggested data could easily be translated into a variety of formats and that the total number of measures was not limited by potential space constraints. The Subcommittee encouraged the Agency to use the core data set for other purposes, including, but not limited to: on-line, site-specific reporting tools accessible to the public; a 1-page report-card that would score a site and allow comparisons among sites; and longer fact sheets for site stakeholders looking for a comprehensive overview of their site. Some members of the Subcommittee saw the ability to compare across sites as a significant value for EPA managers, community groups, Congress, and other stakeholders. Different data sets may be appropriate for different purposes. However, the Subcommittee does not intend to create an unwieldy

data reporting and tracking system. A critical assumption driving the Subcommittee's support for increasing the core set of data and encouraging a variety of applications is the understanding that such a system could be highly automated. The Subcommittee's understanding is that the majority of the data could be efficiently downloaded from the existing tracking system and automatically reported in a variety of formats.

Given the Agency's flexibility in terms of the reporting format, the Subcommittee recommends that the Agency track additional measures (for which data currently exist), and, in the future, add measures for which data do not currently exist but can reasonably be obtained. While the Subcommittee agreed to the value of additional data, it did not reach consensus regarding which additional items should be tracked. Individual members offered many suggestions as examples of data that could increase the effectiveness of the Performance Profiles or provide valuable information for other purposes as described above. The extensive list of ideas and supporting text are included in Appendix VII. (This list does not represent the consensus of the Subcommittee, but reflects the compilation of individual suggestions by of a number of participants)

Given that measures of progress and performance drive decision making and expectations at the site and Program levels, the measures being utilized to evaluate the Program need to be consistent with the management goals and priorities that are guiding the work being conducted. Therefore, the Subcommittee worked to ensure that the recommendations in this chapter of the report are consistent with the site listing and management recommendations presented in other chapters.

Measures of Coordination and Collaboration

To highlight a set of critical Program elements that have historically received inadequate attention, the Subcommittee focused on issues associated with how affected Tribal Nations, communities, and state and local governments are integrated into the decision-making process, and the degree to which their participation in decision-making has been meaningful. The Subcommittee realizes that there are many important elements of an effective national Superfund Program and successful project management. For example, effective coordination with PRPs is also critical to the success of the Program and the quality and frequency of such coordination can be improved by the Agency. However, the decision to focus on Tribal Nations, communities, and state and local governments was made not because it is more important than these other elements, but because it was seen by many Subcommittee members as equally important and historically underemphasized. While all members supported the principles and recommendations set forth in this section of the report, some members believed that the scope should have been expanded to explicitly include measures that indicate the effectiveness of EPA's coordination with PRPs while other members believed that measures and data that are currently available provide a reasonable indication of the effectiveness of the EPA/PRP relationship.

▀ Coordination with Tribal Nations, State and Local Governments and Communities

Effective and efficient partnerships with all parties are critical to the success of the Program and making good decisions regarding the listing and management of NPL sites, leveraging existing resources and sharing the burdens of site cleanups.

Two expert panels helped to inform the Subcommittee on these matters. The comments received from these panels and members of the public were very relevant to the development of this section of the report. On January 7, 2003, in Washington, D.C. a panel of representatives of Tribal Nations appeared before the Subcommittee, and on June 18, 2003 in New Bedford, Massachusetts, a panel of Environmental Justice experts appeared before the Subcommittee. Their testimony and that of the public helped the Subcommittee understand the concerns and complex challenges facing these underrepresented populations at NPL sites. The following recommendation is intended to address such concerns and challenges.



Recommendation 12: EPA should develop measures of performance that assess the effectiveness of Agency coordination with Tribal, state and local governments and community stakeholders.

By engaging a wide variety of perspectives in decision-making throughout the process, the Subcommittee believes that EPA will gain better understanding of the problems and issues posed by each site, and as a result will reduce the likelihood of delay caused by last-minute objections or new information from communities that would have improved decision making. There are roles, authorities and jurisdictions unique to each of these parties, and any proposed measures would supplement, document, and encourage the appropriate coordination and involvement in decision making required by these established relationships.

Communities affected by the decisions made under Superfund are an integral part of the decision-making process at both the site and the national levels. While EPA reflects support for this principle in various guidance documents and has done important work recently in developing a collaborative model for work among communities, business and governments on specific projects, the practice of implementing guidance remains uneven across the country. Therefore, the Subcommittee's recommendations are intended to reinforce and highlight the importance of the effective policies and guidance that have been developed to date by the Agency. The Subcommittee believes it would be helpful to emphasize the importance of meaningful Tribal, state and local government and community participation by 1) measuring the success related to such participation, and 2) more aggressively incorporating the concept into the Program's day-to-day management. Recommendations related to both of these approaches are included below.

Measuring the quality of engagement of stakeholders is inherently difficult. Many traditional measures of public involvement have historically focused on formal “notice and comment” requirements that represent nothing more than checking a box. Such measures can be useful in ensuring that certain activities and contacts are made, and the Subcommittee continues this tradition to some extent with its recommendations aimed at implementing existing guidance. However, this “check list” approach does not illuminate the question of whether the engagement is meaningful or merely perfunctory. Yet, clearly there is a range in the impact, quality, or thoroughness of public participation and institutional coordination and involvement achieved among Superfund sites. Doubtless there also is considerable variation in the interest of various publics and institutions in the process, ranging from indifference at some places to intense concern about or even opposition to Agency procedures, decisions or actions at other locations.

The Subcommittee does not intend for EPA to measure the extent to which communities are wholly satisfied with remedy decisions. Communities are not monolithic and may reflect as many different opinions regarding the ideal remedy as there are participants at the table. Some of these views may be related to issues other than the fundamental questions of cleanup levels and technologies. For example, traffic disruption, utilization of local work force, and end uses of a site can be of local concern. Rather, the Subcommittee believes that EPA should attempt to capture whether communities believe that (1) they have had an opportunity to participate meaningfully in the remedy selection process, and that their input was considered and incorporated appropriately – even if every participant did not get everything desired; and (2) the decisions reached will most likely prevent unacceptable risks to public health and the environment.

In the cases of Tribal nations and state and local governments, the Subcommittee believes that a measure to indicate whether they “felt that EPA made a sincere effort to cooperate/coordinate with you on the site” would be an appropriate supplement to the aforementioned questions in order to gain a more accurate measure of the effectiveness of their relationships with EPA.

While investing in these activities diverts resources from on-the-ground remedial activities, most members of the Subcommittee believe that coordination with Tribal Nations, communities and state and local governments is integral to an adequate analysis of alternatives and (similar to remedial design) is necessary to ensure that remedies will be effective and implemented in an efficient and timely manner, and may reduce the need to re-design or reopen the remedy selection process at a later date. In the long run, therefore, functional relationships with all stakeholders can help to speed cleanups and reduce overall costs. However, some members of the Subcommittee felt strongly that the Agency needs to increase its allocation of resources toward on-the-ground cleanup. A better understanding of the resources required to implement these coordination recommendations is necessary for the Agency to make decisions regarding prioritization of its resources.

National Performance Measures Versus Site-Specific Evaluation Tools

Similar to the site-level and national-level performance profiles addressed in the previous recommendation, the Subcommittee recommends that the effectiveness of the Agency's engagement with Tribal Nations, state and local governments, and communities be considered at multiple levels. A national performance measure along with site-specific evaluation of the Agency's activities serve distinct and important purposes related to evaluation of Program success while simultaneously offering valuable management tools.

The Subcommittee discussed a number of potential metrics and approaches designed to capture whether input from state and local governments, Tribal Nations, and communities were appropriately considered by EPA. It concluded, however, that none of these objective, measurable approaches would yield unambiguous, usable data. As a result, the Subcommittee has decided that direct questioning of target audiences is most likely to provide the information sought. The Subcommittee acknowledges that the design of surveys (and similar data collection tools) and implementation of these tools is a specialized discipline that is not represented among its members. Therefore, members do not believe they are qualified to identify the precise method and questions to be used by EPA. Nevertheless, they believe that the core issues that should be addressed by a site-specific survey with data compiled at the national level are:

- ➔ Whether stakeholders believe they were offered sufficient opportunities to provide meaningful input,
- ➔ Whether their input was thoughtfully considered and incorporated as appropriate, and
- ➔ Whether stakeholders believe that human and environmental health have been or will be protected by measures taken pursuant to the Superfund Program.

By posing these questions to representatives of affected communities, Tribal Nations, and state and local governments at a site-specific level and aggregating the results at the national level, EPA could use such metrics to measure overall Program success and reflect incremental change or improvements. The most meaningful interpretation of these results will be comparative over subsequent years. As EPA's outreach improves, the Agency should expect the responses to these questions to be more favorable. Furthermore, aggregating and interpreting results across stakeholders by sites and ultimately across the nation, will represent the whole range of views and reveal general trends. The underlying data would need to be analyzed more particularly to discover specific trends and perhaps areas or constituents in need of improved communication.

Actual implementation of survey tools is likewise best left to experts. However, the Subcommittee is aware of existing efforts to implement such surveys and offers the following suggestions to improve the effectiveness of the efforts to date:

- ➔ The collection of such data should be made as easy and convenient as possible, so as not to create an unwieldy administrative burden on the Program.
- ➔ To the extent possible, EPA should collect this kind of feedback through existing forms, interviews, public meetings, and other communication mechanisms and

tools, as opposed to developing duplicative new tools for collecting data. (Specific examples of such tools are identified in the next section.)

- ➔ Technical assistance grant (TAG) recipients should be asked to provide answers to these core questions (online options should be available) along with their other reporting duties.
- ➔ Community Advisory Groups (CAGs) should be asked to provide input (recognizing that in most cases they are not receiving funds from EPA and may have very limited resources).
- ➔ Input should be sought not only from the most active participants but also from a representative sampling of entire affected communities, including the local governmental officials.
- ➔ Care should be taken to distinguish feedback from residents most directly affected by the contamination and decisions at the site.
- ➔ Data should be collected so as to enable separate analysis and reporting of results for mega sites, federal facilities, fund-lead versus PRP-lead sites, TAG recipients, CAG members, immediate neighbors to facilities, and other categories as may be identified as distinguishable, as well as totals for the entire Program.

Site-Level Measurements and Management Tools

Some members of the Subcommittee also recommend that the Agency provide incentives to implement existing guidance and policies by measuring the success of these efforts on a site-specific basis. For example, the Agency should maximize the use of the required community interviews and Community Involvement Plans by:

- ➔ Targeting a broad set of key stakeholder audiences and Natural Resource Trustees during the community interviews and during the design and implementation of the community involvement plan;
- ➔ Making community involvement and institutional coordination more integral to site management; and
- ➔ Integrating community involvement and institutional coordination factors into reporting requirements.

Additionally, the Agency should increase its emphasis on the implementation of site-level efforts underway, including site-specific community effectiveness surveys (“What Do You Think about EPA’s Community Involvement Efforts at X Site?” in Attachment 5C.), and the questionnaire templates that have been developed for CAGs, listening sessions, public meetings and community interviews. These tools can collect valuable information about the Program’s effectiveness and have the potential to better inform decision making at the site and regional levels. Therefore, these members of the Subcommittee believe that EPA should implement the following guidance:

- ➔ Target a broad set of key stakeholders in the distribution of the various evaluation tools.
- ➔ Take advantage of existing mechanisms for the circulation, communication and collection of results from various tools to minimize additional expenditures. Consider hand delivery of survey forms.

- ➔ Aggressively apply the tools to mega sites in particular. Outreach may be more complex and expensive to administer at some of these sites due to the distribution of affected individuals over large geographical areas. However, the costs of bad or delayed decision-making are likely to be higher at such sites as well.
- ➔ Prioritize Environmental Justice communities as a primary target for outreach efforts.
- ➔ Increase the number of surveys conducted at sites (14 have been completed) and do not limit surveys to sites at which community coordinators or remedial project managers request them.
- ➔ Dedicate additional resources to survey administration, interpretation, and distribution of results.
- ➔ Carefully consider the timing of such surveys. It may be that feedback—especially from large, expensive sites—would be useful at least at the remedial investigation, feasibility study, and record of decision stages. Surveys related to inactive sites also could provide valuable input.
- ➔ Provide respondents the opportunity to submit information anonymously.

EPA may also want to consider collecting information from PRPs and perhaps other sources (regarding their experience), in order to accurately and comprehensively capture the nature of Tribal, state and local government, and community engagement at the site. In particular, the perspectives of all of these entities regarding the responsiveness of the Superfund Program could be useful if supported with concrete examples of modifications made to decisions based on input received from communities and institutions.

Some Subcommittee members also recommend that the Agency continue to invest in the development and implementation of tools for conducting, tracking and evaluating community and Tribal involvement, with a view toward increasing awareness throughout the Agency of the value and benefits of the perspective of these stakeholders. For example, the Agency may want to consider sensitivity training and environmental justice training for its regional project managers.

Finally, some members of the Subcommittee recommend that the Agency explore the option of engaging independent reviewers or outside consultants to evaluate the effectiveness of Tribal, state, and local government, and community coordination efforts, and initiate a national dialogue to further explore these issues, as described in Chapter VI.

¹ Reported by EPA in the Charge to the NACEPT Superfund Subcommittee

² *2003-2008 EPA Strategic Plan: Direction for the Future*, U.S. Environmental Protection Agency, September 30, 2003, pre-publication copy.

³ Revised version provided to the Subcommittee by EPA via email 1/20/04

⁴ Reported by the Agency as an explanation of Figure 4-1 to the Subcommittee in its November 2003 meeting.

⁵ The term construction complete was codified in the NCP Federal Register notice of March 8, 1990.

VI. Additional Priority Issues

As indicated earlier, the Subcommittee was established to help EPA shape the future of the Superfund Program by providing advice on the role of the National Priorities List (NPL), how to manage mega sites, and how to measure the Program's progress and performance. During their deliberations, the Subcommittee members identified several additional issues that they felt are important to the success of the Superfund Program and should receive serious consideration by EPA and others interested in the Program. In some cases, the topics were beyond the Subcommittee's ability to fully deliberate or reach consensus on within the time available. In other cases, some Subcommittee members thought that the topics were outside of their areas of expertise. Despite these limitations, the Subcommittee wanted to bring these issues to the attention of those interested in the Superfund Program and believe they should be part of the continuing dialogue about the Program. In some cases, consensus recommendations have been developed to address these issues, and in other cases the Subcommittee was unable to reach consensus and therefore offers a range of views on the following:

- ➔ Emphasizing prevention;
- ➔ Ensuring adequate financial assurances;
- ➔ Examining the roles of the Agency for Toxic Substances and Disease Registry; (ATSDR) and the National Institute of Environmental Health Sciences (NIEHS);
- ➔ Increasing the effectiveness of land-use controls and long-term stewardship;
- ➔ Determining the need for input on the Superfund Alternatives Sites; and
- ➔ Continuing the discussion of important national issues
 - > Issues unique to cleanup at federal facilities and
 - > Effective community involvement.

Deliberations on Emphasizing Prevention

The topic of pollution prevention was not specifically part of the Subcommittee's Charge. However, some members of the Subcommittee believed that this topic was relevant to address in the report because of its focus on sites that could be considered for the NPL and the desire to prevent the need for major cleanup at facilities in the future. While all members held a common interest in preventing the creation of new Superfund sites, some felt that the Resource Conservation and Recovery Act (RCRA), rather than the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA),

was the appropriate statutory authority and that given CERCLA's focus on cleanup, the topic was outside of the scope of the Subcommittee's charge.^A

The federal government, states, Tribal Nations, and other jurisdictions have statutory and regulatory programs designed to promote safe management of hazardous materials. In addition, many private companies and facilities have integrated significant pollution prevention steps into their everyday operations with marked success. In other cases, however, because of either a lack of adequate enforcement or a lack of sufficient environmental controls, contamination continues to occur at some facilities. If not addressed, this contamination could turn into a major cleanup need at some operations. In addition, where insufficient financial assurances have been provided, some cleanups could get shifted to the NPL, further burdening an already overstretched Program. While pollution prevention efforts will not prevent all sites from being added to the NPL, such measures could reduce the numbers of sites that might otherwise be listed. To address these concerns, the Subcommittee believes that EPA should take steps both to prevent the creation of sites that may need cleanup in the future and to prevent sites that may need clean up from having to draw upon the financial resources of the Superfund Program.

Some members of the Subcommittee believe it would be prudent for EPA to identify prevention techniques across all programs to determine if their application to Superfund would prove useful. Further, EPA should review sites added to the NPL in recent years to determine whether trends exist with respect to contaminants, types of sites and other characteristics so as to assess whether a stronger focus on pollution prevention could have kept those sites from becoming Superfund sites. The information from such a review could potentially be used to strengthen the focus on pollution prevention in Environmental Impact Assessments and Statements.

The intent of this analysis is to support the development of guidance to the Regions and states for a renewed focus on pollution prevention. In addition, the results of such an analysis could support efforts by the Agency to improve financial assurances so that, over time, fewer fund-lead sites would be created. (See the following discussion in this chapter on financial assurances) This effort should not be so intensive that it unduly drains resources from the goal of cleanup.

EPA should undertake pollution prevention reviews in an open and transparent fashion. Communities located near facilities have a long-term interest in working with EPA and industry to promote pollution prevention programs that provide opportunities for sound economic development, while reducing threats to public health and the environment. Similarly, companies that engage in pollution prevention activities have an interest in ensuring that all companies undertake such measures in order to ensure a level playing field.

^A Subcommittee member Richard Stewart supports this view. See Attachment A for Mr. Stewart's individual statement and elaboration on his position.

Deliberations on Ensuring Adequate Financial Assurances

While the Subcommittee as a whole did not spend considerable time researching or deliberating the complex issue of financial assurances, to try to ensure that currently operating facilities do not need Superfund dollars for cleanup in the future, some Subcommittee members felt that the issue was integral to the role of the NPL.^B These members believe that the role of the NPL should not be focused on newly contaminated sites; rather, existing programs should prevent and rapidly respond to such contamination as it happens. Other members of the Subcommittee felt that the topic was outside of the scope and areas of expertise of most of the members and, therefore, was inappropriate to address in this report. Additionally, while the scope of the Subcommittee was focused on Superfund, some members felt that the scope of the recommendation should not be limited to Superfund sites, since this approach could be used to prevent the creation of future NPL-caliber sites.

Members who felt that the issue should be addressed by the Subcommittee were very concerned about the adequacy, quality, and long-term stability of financial assurances. These members believe that EPA and the states should develop the skills to rigorously and uniformly evaluate proffered financial assurance in a manner consistent with the best financial practices used by the financial industry. Some of the Subcommittee members suggested that the EPA look to the evaluation procedures and techniques (such as those employed by Moody's, A.M. Best, and Standard and Poors) to ensure EPA and its delegate administrators accept only financial assurance of the highest quality. Any such process should include both initial and periodic reviews, in accordance with financial industry standards. EPA headquarters should develop guidelines to implement the rigorous process outlined above for the use of regional and delegate administrators.

Specifically, the Subcommittee members who supported addressing this issue proposed that EPA undertake efforts to enhance and implement financial assurances that can be used for Superfund sites in order to reduce Program expenses, encourage timely settlements with viable and cooperative PRPs, and prevent the creation of new orphan shares. They pointed to Section 108(b) of Superfund, which requires EPA to create regulations mandating financial assurance for facilities.^C

^B Subcommittee member Vicky Peters agrees that improved financial assurances is integral to the charge from EPA; in particular, the role of the NPL. See Attachment A for Ms. Peters' individual statement.

^C Subcommittee member Vicky Peters agrees with the perspectives presented in support of the implementation of financial assurance measures. See Attachment A for Ms. Peters' individual statement.

Examining the Roles of ATSDR and NIEHS

During the Subcommittee's deliberations, the relationships of both the Agency for Toxic Substances and Disease Registry (ATSDR) and the National Institute of Environmental Health Sciences (NIEHS) with the Superfund Program were initially raised in the context of analyzing the Superfund budget. In the opinion of some of the Subcommittee members, the ties between these agencies and the Superfund Program in terms of funding and the potential to influence site listing and management decisions justified additional inquiry into the potential to increase program efficiencies and effectiveness.

■ ATSDR Background

ATSDR was created in 1980 by CERCLA. As reported to the Subcommittee,¹ ATSDR is the principal federal public health agency charged with evaluating the human health effects of exposure to hazardous substances. ATSDR's mission is to prevent exposure to—and adverse human health effects and diminished quality of life associated with exposure to—hazardous substances from waste sites, unplanned releases, and other sources of pollution present in the environment. ATSDR carries out its mission through programs in public health assessments, consultations and studies, exposure and disease registries, toxicological profiles, applied research, health education and communication, emergency response, and emergency events surveillance.

ATSDR evaluates the potential health impacts at hazardous substance sites or spills through its public “health assessments” or “health consultations.” ATSDR health assessments on sites include the following:

- ➔ An evaluation of the information available about site-specific contaminants,
- ➔ A determination of whether people might be exposed to environmental hazards from the site,
- ➔ A determination of what harm exposure to site contaminants might cause, and
- ➔ Recommendations for actions to protect people's health.

ATSDR and EPA respond to site-specific environmental concerns from private citizens, as well as state and federal agencies to determine if there is a completed exposure pathway, if there have been prior exposures, and the possible health effects of such exposures. Depending on the existence of or potential for exposures, ATSDR recommends or performs appropriate prevention and follow-up health activities.

■ NIEHS Background

In 1966, the U.S. Surgeon General established the Division of Environmental Health Sciences as a part of the National Institutes of Health. In 1986, under the Superfund Amendments and Reauthorization Act, Congress established two programs—the Superfund Basic Research and Training Program (SBRP) and the Worker Education and

Training Program (WETP)—to be managed within the National Institutes of Health (42 U.S.C. §9660). NIEHS provides funds to universities and nonprofit institutions to accomplish the goals of both these programs. Currently, there are 19 SBRP grantees and 18 WETP grantees.

As reported to the Subcommittee,² the SBRP is a university-based program that supports basic research and training grants in the area of risk assessment. This research is designed to address the wide array of scientific uncertainties facing the national Superfund Program. The goal of supporting research in this area is to provide a better understanding of contaminant toxicity issues, so that emerging data can be integrated into risk assessment and remediation decision making. The primary objective of the WETP is to fund nonprofit organizations to provide high-quality training to workers who are involved in handling hazardous substances or in responding to emergency releases of hazardous materials.

ATSDR and the two programs under NIEHS received their funding as pass-through money from EPA until 2001, when Congress chose to appropriate the funds for these two programs directly to the respective agencies. Even though the appropriations are no longer tied to EPA's funding, CERCLA reflects Congress' intent that the information generated and services performed by ATSDR and NIEHS would contribute to the goal of appropriately identifying and cleaning up national priority sites. Furthermore, the money previously appropriated to EPA for these agencies was subtracted from the EPA budget for conducting Superfund activities. Given the emphasis placed on identifying current human health threats posed by releases of hazardous substances, it is imperative to maximize the utility and effectiveness of the activities of these programs, in particular ATSDR, which was specifically created to focus on human health issues at proposed and listed Superfund sites. It is the experience of many of the members of the Subcommittee that the mission of these agencies, with respect to their support for the Superfund Program, has not been fully realized.

In August 2003, the Subcommittee sent to NIEHS and ATSDR a short list of fundamental questions regarding the functioning of their programs, to establish a common understanding of the responsibilities of the agencies and the relationship between their efforts and those of the Superfund Program. The intention was to build upon that common understanding to identify strengths and shortcomings in the existing Program, and to develop suggestions for EPA to improve the relationship and maximize efficiencies with regard to interrelated activities. In response to these requests, the Subcommittee received the written correspondences referenced above. In addition, Dr. Henry Falk, Assistant Administrator for ATSDR and Ms. Beth Anderson, Program Analyst of NIEHS, participated in the Subcommittee's November 4, 2003, meeting.

Given time constraints, the breadth of its charge from EPA, and the difficulty obtaining the necessary information, the Subcommittee was unable to delve into these issues to the degree that many members desired. With the limited information provided, along with the direct experience of some Subcommittee members, these Subcommittee members identified a number of recommendations for EPA related to the work of ATSDR and NIEHS.



Recommendation 13: EPA should improve its cooperative relationship with ATSDR. EPA in coordination with ATSDR should make a concerted effort to work with affected communities, states, and Tribal Nations to regularly identify, on a site-specific and nationwide basis, projects and research efforts that would be most helpful in determining adverse health effects posed by releases of hazardous substances, thereby informing decisions related to NPL listings, investigations, and remedy selection and implementation. EPA should include recommendations both in proactive suggestions for projects, and in reactive comments on ATSDR proposed projects. ATSDR's responsiveness to these recommendations should be included in EPA's (annual) reporting.

Some members of the Subcommittee representing community, environmental justice, state and public interest perspectives believe that many stakeholders, particularly, communities, have the perception that ATSDR is not adequately responsive, and its work products are not useful in understanding adverse health effects and risks posed by hazardous substance releases at Superfund sites. Dr. Falk informed the Subcommittee, that his agency has a formal liaison with EPA, and tries to perform work projects where requested by EPA. While coordination seems to take place at high levels between the agencies, it is the perception of many Subcommittee members that such coordination does not appear to consistently or effectively influence decision making at the site level. Other members of the Subcommittee believed that the information presented for review was insufficiently balanced to reach this conclusion.

To better match the output of ATSDR with reasonable expectations and the needs of the Program and its stakeholders, the Subcommittee would like EPA to be more proactive in targeting the research efforts of ATSDR. For example, conducting in-depth body burden studies of community members known to have the greatest exposure to a release could provide greater benefit to the community and EPA decision makers than a cursory summary of existing environmental and risk data for a site. Such targeted biomarker studies could provide site-specific information more quickly, in time to influence the early decisions that must be made for characterizing and managing sites. This has the potential to save time and money, and to reduce impacts on human health. Under ATSDR's interpretation of CERCLA, either of these activities would satisfy its mandate to perform a health assessment at each NPL site.



Recommendation 14: EPA should establish a transparent and cooperative relationship with NIEHS to provide recommendations and rationale for research, and to become educated on the efforts and findings of NIEHS. In so doing, EPA Site Managers and Community Involvement Coordinators should be educated as to the resources available from NIEHS (and ATSDR) and should always inform the community of these resources.

The Subcommittee respects the role of NIEHS in performing basic research. However, from the perspective of many stakeholders in the Superfund process, this role appears to be divorced from the issues and needs of the Superfund Program and its affected stakeholders. EPA's views regarding useful research initiatives should be provided to NIEHS in a meaningful way, and the results of such research should be referenced in EPA's [bi] annual report. If such involvement is already taking place, the process should be made more transparent to affected stakeholders who may have an interest in providing input and/or tracking the results. Such an effort is likely to result in broader application of the research and decreased duplication of research and reporting efforts.

EPA is the agency with the most direct and continuous interaction with states, Tribal Nations, and communities. Therefore, EPA is in the best position to ensure that these stakeholders are informed regarding the potential available resources and health information relevant to site cleanups. Health issues are frequently the issues of greatest concern to affected communities. While NIEHS is primarily involved in basic research and training, the studies it funds address concerns at specific Superfund sites. A process to convey the NIEHS findings to the field is lacking and should be implemented, especially in those communities with contaminants studied under NIEHS funding.



Recommendation 15: EPA, working with ATSDR and NIEHS, should convene a national dialogue on the role of ATSDR and NIEHS in the Superfund Program.

Specific decisions regarding the most useful activities to be performed at a site will need to be made at a local level. However, ATSDR and NIEHS have several responsibilities that relate to national issues, such as the compilation of toxicological profiles and the Disease Registry. For such national issues, and to better understand and define priorities, best practices, and lessons learned in performing site-specific studies, the Subcommittee believes EPA should obtain input from stakeholders—in particular, states, Tribal Nations, and communities through a national dialogue on the role of ATSDR and NIEHS in the Superfund Program. This dialogue should be conducted in cooperation with all the agencies involved and could take the form of a series of workshops or meetings culminating in collaborative thinking or position statements (as deemed

appropriate by EPA). The findings and conclusions from this effort could be incorporated into the proactive agenda-setting suggested in Recommendation 13, above.

■ Guidance for Declaring Public Health Emergencies

Some Subcommittee members believe that one of the primary concerns expressed by affected communities relates to obtaining credible information on the possible health effects resulting from exposures to hazardous substance releases, and on the medical alternatives to address those health effects. Such medical care and testing are referenced in CERCLA, 42 U.S.C. §104(i)(1)(D) and (E), which provide as follows: “in the case of public health emergencies caused or believed to be caused by exposure to toxic substances, provide medical care and testing to exposed individuals....” However, the services that can be provided, and the circumstances under which such services can be provided are unclear. Therefore, while consensus on a recommendation was not reached, some members of the Subcommittee believe that EPA, in cooperation with ATSDR, should create guidance that describes: (1) the agency or agencies responsible for declaring “public health emergencies” under CERCLA, including 42 U.S.C. §104(i)(1)(D) and (E); and (2) the criteria that an agency or agencies will use to declare such a public health emergency. This guidance should also describe how and when the federal government intends to implement its statutory duty under §104(i)(1)(D) of CERCLA to, “in the case of public health emergencies caused or believed to be caused by exposure to toxic substances, provide medical care and testing to exposed individuals...,” and provide for “admission to hospitals and other facilities and services operated or provided by the Public Health Service,” as such facilities are no longer available. EPA and ATSDR should develop this guidance in an open and transparent process that involves the representatives from the Department of Health and Human Services, and the public and other stakeholders, including written public comments.

Some members of the Subcommittee questioned the merit of this proposed policy. Additionally, some members felt that a recommendation on this topic is inappropriate because adequate analysis and evaluation of the legal and policy implications of the above suggestions were not explored in a balanced manner.

Increasing the Effectiveness of Land-Use Controls and Long-Term Stewardship



Recommendation 16: EPA should develop a system to track, evaluate, and increase the effectiveness and the performance of land-use controls and long-term stewardship at NPL sites.

The implementation, tracking, maintenance, and enforcement of land-use controls³ are critical at most sites in ensuring long-term protectiveness. Many issues still need to be addressed regarding the use and enforcement of land-use controls, including ensuring that needed controls are in fact implemented, and providing funding for the costs of implementing, monitoring, and enforcing these various controls. Some Subcommittee members believe that these issues are extremely important and should be a high priority for the Superfund Program, given the Program's emphasis on permanent treatment.

Time constraints limited the degree to which the Subcommittee was able to research and discuss this issue. However, the Subcommittee was informed of significant advances EPA has made in recent years to address issues associated with land-use controls. For example, EPA has been promulgating thoughtful and thorough guidance supporting the efforts of the National Conference of Commissioners on Uniform State Laws, and funding the creation of a model Land Use Control Implementation Plan for use by state and local governments. In addition, EPA has expended substantial effort to develop a national institutional controls tracking system, in cooperation with federal, state, Tribal, local, and industry entities. This system is intended both to enhance the effectiveness of land-use controls and to provide information on all cleanup sites with land-use controls in a community.

Continued effort is needed to address the information gaps and respond to ineffective remedies. In particular, improvements suggested by Subcommittee members included the following:

- ➔ Improve documentation of failures of land-use controls.
- ➔ Improve documentation of actions that have been taken to enforce land-use controls.
- ➔ Address the overlapping and often disconnected responsibilities at different levels of government for implementation of tracking, monitoring, and/or enforcement.
- ➔ Improve the standardization of terms.
- ➔ Increase federal, state, Tribal, and local agencies and industry's participation in the coordinated tracking effort.
- ➔ Assess the effectiveness of five-year reviews to evaluate such controls.
- ➔ Increase the Agency's compliance with CERCLA's preference for permanent remedies.

The Subcommittee supports the continued investment in the Agency's efforts, and encourages EPA to improve training and accountability among project managers, many of whom do not follow EPA's existing guidance. Further, the Subcommittee concurs with EPA's view that the development of performance measures for long-term stewardship activities is critical. (This topic is addressed briefly in chapter V.) The Subcommittee regrets that it did not have sufficient time to undertake the elements of the Charge dealing with long-term stewardship issues, and encourages EPA to pursue the issue through ongoing national dialogue.

The Need for Input on the Superfund Alternatives Strategy



Recommendation 17: EPA's strategy for Superfund Alternative Sites should remain a small pilot program until significantly more input is received from a broad range of perspectives, and an independent body produces for public review and comment a report describing the extent and performance of this program and its compliance with CERCLA.

Significant concerns were raised by the Subcommittee members before and after reviewing the limited information provided by the Agency on Superfund Alternative Sites (SASs). Questions were raised about whether the approach used at SASs was consistent with the general trend toward increased transparency that the Subcommittee is advocating throughout the report. Additionally, the Agency's policy at SASs may have the potential to be inconsistent with a number of EPA administrative reforms and guidance. This policy is based upon EPA's individual arrangements with private parties outside of the NPL listing process. Although such guidance for the SASs requires consistency with the National Contingency Plan and a mandatory technical assistance grant, it is not clear what oversight will be conducted, whether remedies selected will be comparable to those selected for sites on the NPL, and whether these sites will be cleaned up faster or slower than NPL sites. While sharing these concerns, some Subcommittee members also believe that the Agency should be encouraged to explore creative approaches to achieving cleanup results outside the standard NPL-based process, and that the fundamental objectives of the SAS program to help facilitate more efficient and timely cleanups are important to maintain. However, these Subcommittee members are also concerned about the potential use of programs like SAS to avoid fundamental process protections and reforms that benefit a wide variety of interests. Because of the above reasons and because the information needed for a thorough evaluation unavailable, the Subcommittee feels that the SAS efforts should remain small and in a pilot phase administered by headquarters until significantly more input is received from a broad range of perspectives on the value and limitations of this strategy.

Deliberations on Continuing the Discussion of Important National Issues

During its deliberations, the Subcommittee identified additional issues that some members felt were critical to the success of the Superfund Program, but were beyond their ability to fully examine during the time available. Some of these issues were addressed in conjunction with other topics in the report, such as the ATSDR recommendations above. Some of these issues were not discussed by the Subcommittee and some members feel they warrant additional consideration by EPA and others interested in and impacted by the Program. Those members have proposed that

EPA continue the national-level dialogue on (1) effective community involvement and (2) issues unique to federal facilities. The goal of such ongoing dialogue is to provide better-informed and more comprehensive input to the agency on some of the challenges that the Subcommittee identified but did not adequately address.

Many members were concerned that these national dialogue efforts could be very expensive and time consuming and would drain resources from site cleanups. They felt that, if implemented at all, these initiatives should be implemented in a manner that is efficient and sensitive to their impact on Program resources. Therefore, many members felt strongly that these dialogues should not take the form of a Federal Advisory Committee Act Process (FACA) because they believe that the FACA process is unnecessarily resource intensive and inefficient.^D Other members felt that a FACA was an effective option that provides weight and authority to the outcome and therefore should be considered among the many forums available for convening a constructive national dialogue on these important issues related to Superfund.

National Dialogue to Develop Recommendations on Effective Community Involvement

As discussed in Chapter V of this report, one measure of a successful cleanup program is the effectiveness of the community involvement program. Though much has been written about community involvement via Agency guidance and other national policy dialogues, consensus and general understanding of what constitutes effective community involvement do not exist. To achieve such understanding and perhaps consensus, the Subcommittee recommends that EPA conduct a national dialogue, possibly one that falls under the umbrella of NACEPT (though Subcommittee members disagree on whether a federal advisory committee is the best forum) Regardless of the most appropriate format, this effort is intended to serve the following purposes:

1. By establishing consensus recommendations, the dialogue would clarify the appropriate role of the community in the cleanup decision-making process for the benefit of both EPA and the community.
2. Further, it would help to establish reasonable expectations regarding the capabilities of the Superfund Program in general and the role of the public in particular.
3. Any effective dialogue would provide EPA with solid recommendations to implement throughout all of its programs and would be useful in establishing measures of meaningful community involvement.

^D Subcommittee member Richard Stewart supports this view. See Attachment A for Mr. Stewart's individual statement and elaboration on his position.

■ National Dialogue on Issues EPA and Other Stakeholders Face Unique to Cleanup Activities at Federal Facilities

While federal facilities were excluded from the Subcommittee's charge, some members felt strongly that this report would not be complete without a discussion of this critical component of the Superfund Program. Federal facilities that are designated on the NPL fall under the regulatory structure of the Superfund law, but they do not depend on money from the Fund itself or from EPA appropriations. Cleanups at federal sites are funded by the responsible federal agency.

As a group, federal facilities are the most expensive remediation projects in the Superfund Program. There are 171 federal facilities on the NPL and 6 sites proposed to the NPL for a total of 177 federal sites. The annual budget for EPA, the Department of Defense and the Department of Energy federal facilities exceeds \$9 billion. In addition to the NPL sites, great numbers of formerly owned federal sites and federal non-NPL sites compound the magnitude of the problem.

The cleanup of contaminated federal lands, now well underway, is technically challenging, legally complex and enormously expensive. Many federal facilities resemble private industrial contamination sites, with decades of industrial dumping and leaks contaminating soil and groundwater. As a whole, however, federal facilities differ from sites owned by private parties or local governments in at least five ways:

1. Contaminated federal properties tend to be larger, combining several types of contamination and contaminated media on a single property.
2. Certain federal pollutants, such as waste from nuclear weapons production and unexploded bombs and shells, are unusual or unique, with no commonly accepted, cost-effective cleanup technology. In some cases, the technology to clean up these sites simply does not exist.
3. Federal agencies are more resistant to oversight by the agencies established to regulate environmental contamination—EPA and its state counterparts. Only in 1992 did Congress pass the Federal Facilities Compliance Act, clarifying that states had the power to enforce hazardous waste management laws at federal facilities. The Department of Defense has mounted a concerted campaign to roll back the provisions of this and the Superfund law.
4. Agencies with national security missions, such as the Department of Defense and the Department of Energy's nuclear weapons complex, were - and in some cases still are - reluctant to disclose information about contamination at their facilities. This lack of disclosure complicates investigative studies and subsequent remedial designs by ensuring that the full extent of contamination is not adequately characterized.
5. Due to the nature of contamination at Defense and Energy sites, cleanup is projected to take hundreds of years to achieve, if ever.

Additionally, some members of the Subcommittee perceive that federal agencies have been delegated certain cleanup authorities under Executive Orders that may limit the

authorities of regulatory agencies. Other members strongly disagree, believing that the delegation of certain cleanup authorities does not supersede provisions of CERCLA and other laws that subject federal facilities to regulatory oversight.

Because federal facilities are the nation's largest landowner, their contamination touches many lives in all types of communities, from Tribal lands, to rural towns, to national parks, to heavily populated areas. The unique challenges posed by these sites, and the evolution of the Superfund Program since the release of the Federal Environmental Restoration Dialogue Committee Report,⁴ suggest that federal facilities warrant significant consideration by a group of diverse interests specially constituted to focus solely on cleanup issues at federal facilities.

¹ 11/4/03 written correspondence via email “NACEPTresponse-OPEA-2003-11-3-rev”

² 09/5/03 written correspondence via email “NACEPT1.doc”

³ In this context, land-use controls is intended to include institutional controls, administrative controls, containment and other controls, such as signs and fences.

⁴ *Final Report of the Federal Facilities Environmental Restoration Dialogue: Consensus Principles and Recommendations for Improving Federal Facilities Cleanup*. EPA, April, 1996.



Glossary of Terms

This is a previously approved glossary of terms. Many of the terms and definitions have been reported previously in “Superfund’s Future: What Will It Cost?”, Probst, Katherine N. and Konisky, David M., et al, 2001, and are being reprinted with permission.

construction complete: A site at which the physical construction of all cleanup actions is complete, all immediate threats have been addressed, and all long-term threats are under control. Construction complete sites can still have one (the last) remedial action under way.

deleted NPL site: A National Priorities List site at which EPA has determined, with state concurrence, that no further response is required to protect human health or the environment. After approving a closeout report establishing that all response actions have been taken or that no action is required, EPA publishes a deletion notice in the *Federal Register*.

emergency response: A removal action that, based on the lead agency’s evaluation of the release or threat of release of hazardous substances, must begin within hours.

environmental justice (EJ): The fair treatment and meaningful involvement of all people—regardless of race, color, national origin, or income—with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

extramural cost: Expenditures made by EPA that are “external” to the Agency, including contracts, interagency agreements, and cooperative agreements with states.

final NPL site: A site, usually with a Hazard Ranking System score of 28.5 or higher, that has been added to the National Priorities List through the issuance of a final rule in the *Federal Register*. EPA can use Trust Fund monies to pay for long-term remedial actions only at final NPL sites.

Fund-lead action: An action financed, in whole or in part, and conducted by EPA (often by the U.S. Army Corps of Engineers, contractors, or state agencies).

Hazard Ranking System (HRS): The system EPA uses to score potential risks to human health and the environment from actual or threatened releases of hazardous

substances at a site. In general, a site must score at least 28.5 to be placed on the National Priorities List.

intramural costs: Expenditures made by EPA that are “internal” to the Agency, including expenditures for payroll, travel, and supplies.

long-term response action (LTRA): Fund-financed operation of groundwater and surface water restoration measures, including monitored natural attenuation, for the first ten years of operation.

mega site: A site with actual or expected total removal and remedial action costs of \$50 million or more.

no further remedial action planned (NFRAP) site: A site that has been removed from the inventory of Superfund sites and to the best of the EPA's knowledge, the Superfund Program has completed its assessment and has determined that no further steps need to be taken to list that site on the NPL.

non-mega site: A site with actual or expected total removal and remedial action costs of less than \$50 million.

Non-time-critical removal action: A removal action that based on a site evaluation, the lead agency determines does not need to be initiated within the next six months.

NPL candidates: A subset of NPL-eligible sites - that the regions send forward to be considered for NPL listing.

NPL-eligible sites: Sites that EPA regional offices identify as priorities and are sent forward to headquarters for proposed addition to the NPL.

operable unit (OU): A distinct project of the overall site cleanup. Sites can be divided into operable units based on the media to be addressed (such as groundwater or contaminated soil), geographic area, or other measures.

operations and maintenance (O&M): Activities required to maintain the effectiveness and integrity of a remedy, including groundwater pumping and treating, measures to restore groundwater or surface water, and maintenance of landfill caps.

orphan site: A site where the party or parties responsible for the hazardous substance contamination are unknown, or are unwilling or unable to pay for a cleanup.

potentially responsible party (PRP): An individual, business, or other organization that is potentially liable for cleaning up a site. The four types of responsible parties include a site's present owner(s) and operator(s), its previous owner(s) and operator(s) during the time when it received hazardous substances, the generators of such substances, and any waste transporters responsible for choosing the site.

preliminary assessment: The first stage of EPA's screening process for investigating suspected contaminated sites, generally involving review of available documents.

proposed NPL site: A site that has been proposed for NPL listing through the issuance of a proposed rule in the *Federal Register*. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

PRP-lead action: An action conducted and financed by a potentially responsible party or parties. A portion of the response action may be financed by the Trust Fund through a preauthorized reimbursement under Section 106(b) of CERCLA, a practice referred to as preauthorized mixed funding.

Record of Decision (ROD): The public document in which EPA identifies the cleanup alternative to be used at an operable unit of a site.

remedial action (RA): The actual construction or implementation of a remedy at a site or portion thereof.

remedial design (RD): The engineering plan for cleaning up a site or portion thereof. The actual remedial design document includes the technical drawings and specifications that will guide implementation of the remedy, referred to as the remedial action.

remedial investigation and feasibility study (RI/FS): Site studies that involve gathering data to determine the types and extent of contamination at a site (or portion thereof), establishing cleanup criteria, and analyzing the feasibility and costs of alternative cleanup methods. The study can be conducted by EPA, contractors, state agencies, or potentially responsible parties.

site inspection: The second stage of EPA's process for screening a contaminated site to determine whether it warrants inclusion on the National Priorities List. The site inspection involves collecting and analyzing samples of soil and water.

teenager site: A site listed on the National Priorities List that was proposed for listing prior to FY 1987 and that, as of the end of FY 1999, was not construction-complete. In other words, the site has been on the NPL and is still not construction-complete after at least 13 years, making it a "teenager" site.

time-critical removal action: A removal action that, based on a site evaluation, the lead agency determines must be initiated within six months.

Trust Fund: The Trust Fund created by Congress to finance EPA's implementation of the Superfund program, officially called the Hazardous Substance Superfund.



List of Acronyms

This is an EPA approved list of Acronyms as reported in the “Superfund/Oil Program Implementation Manual FY 02/03,” July 9, 2001, Change 1, FY 02/03 SPIM, OSWER Directive 9200.3-14-1G-P and modified.

AA	Assistant Administrator
AMLT	Abandoned Mines Lands Team
ASTSWMO	Association of State and Territorial Solid Waste Management Officials
ATSDR	Agency for Toxic Substances and Disease Registry
CAG	Community Advisory Group
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System
CSTAG	Contaminated Sediments Technical Advisory Group
CWA	Clean Water Act
DoD	Department of Defense
DOE	Department of Energy
DOI	Department of the Interior
DOJ	U.S. Department of Justice
EJ	Environmental Justice
ELI	Environmental Law Institute
EPA	U.S. Environmental Protection Agency
ESI	Expanded site inspection
ESI/RI	Expanded site inspection/remedial investigation
FACA	Federal Advisory Committee Act
FR	Federal Register
FS	Feasibility study

FTE	Full-time-equivalent (position)
FY	Fiscal year
GAO	U.S. General Accounting Office
GPRA	Government Performance and Results Act
HHS	Health and Human Services
HRS	Hazard Ranking System
IG	Inspector General
LTRA	Long-term response action
NACEPT	National Advisory Council for Environmental Policy and Technology
NCP	National Contingency Plan (National Oil and Hazardous Substances Pollution Contingency Plan) or National Contingency Plan
NFRAP	No further remedial action planned
NIEHS	National Institute of Environmental Health Sciences
NPL	National Priorities List
OA	Office of the Administrator
O&M	Operations and maintenance
OARM	Office of Administration and Resources Management
OCFO	Office of the Chief Financial Officer
OECA	Office of Enforcement and Compliance Assurance
OEI	Office of Environmental Information
OERR	Office of Emergency and Remedial Response (OSWER)
OIG	Office of the Inspector General
OMB	Office of Management and Budget
OPPE	Office of Policy, Planning and Evaluation
ORD	Office of Research and Development
OSC	On-scene coordinator
OSRE	Office of Site Remediation and Enforcement (New name for OERR)
OSWER	Office of Solid Waste and Emergency Response
OU	Operable unit
PRP	Potentially responsible party
RA	Remedial action
RCRA	Resource Conservation and Recovery Act
RD	Remedial design

RFF	Resources for the Future
RI	Remedial investigation
RI/FS	Remedial investigation and feasibility study
ROD	Record of Decision
RPM	Remedial project manager
SARA	Superfund Amendments and Reauthorization Act
SAS	Superfund Alternatives Site
SBRP	Superfund Basic Research and Training Program
SI	Site inspection
TAG	Technical assistance grant
WETP	Worker Education and Training Program
USACE	U.S. Army Corps of Engineers

Attachment A:

Subcommittee Members' Individual Statements

Position Statement of: **Sue Briggum**
Environmental Affairs Director
Waste Management, Inc.

The Final Report of the Superfund Subcommittee outlines complex discussions that took place over the course of two years. The facilitators of the Subcommittee should be commended for their attempts to find consensus and for their clarity in describing the basis for disagreement when consensus was impossible. It's been an honor to be chosen to participate in these discussions.

The challenge was significant. Superfund is a highly mature program after 23 years of implementation and construction of final remedies at over 900 sites. Many members of the Subcommittee have decades of experience living near Superfund sites, implementing cleanup plans at sites, or studying the Superfund program on a political or policy level. Although it would be impossible to articulate the precise views of each of the NACEPT's 32 stakeholders, the drafters of the report have done an excellent job of summarizing the substantive points discussed, thus giving the Agency useful policy perspectives.

The Final Report, and many papers from Subcommittee members submitted to the docket for the group, contains important information and perspectives that should be helpful to EPA as it continues to refine the Superfund program. The Final Report should be read in its entirety; the recommendations alone fail to usefully inform the reader of the group's opinions.

There are several aspects of the document I would like to emphasize as a Superfund practitioner for 23 years:

Recognition of Superfund's place in the context of many effective remedial programs: The report repeatedly acknowledges Superfund's relatively small role in terms of the number of sites cleaned up across the country. Superfund sites are intended to be only those of the highest priority, and – as we heard from many state program directors -- other programs handle far more sites, including both low and high-risk sites. This is as it should be. I would urge EPA to review the extensive materials submitted to the docket by Superfund practitioners and state officials about the creative, protective and cost-effective practices of non-Superfund federal and state remedial and solid waste post-closure programs. Best practices should flourish. The recommendations in this report should push EPA in the direction of appreciating and relying upon non-Superfund programs by improving coordination with other agencies, reinforcing review and consideration of other remedial and closure programs before listing a site on the NPL, and involving all responsible parties much earlier in the process in order to incentivize handling of sites within non-Superfund programs. This appears consistent with Assistant Administrator Horinko's One Cleanup initiative, and it's a sensible recognition that Superfund should work in conjunction with, not as a substitute for, other programs.

Strong management of the Superfund program: The report continually stresses transparency and adherence to defined criteria. A common theme is consistency: consistent evaluation of the reasons a site would be handled by the Superfund and not other state or federal programs; consistent and methodical application of a defined set of factors in listing a site on the NPL and thereby committing Superfund staff or resources; consistent early outreach to communities and responsible parties; consistent search for current accurate data on site conditions and impacts. EPA's Headquarters' initiative to accelerate progress at pre-SARA sites is commended in the report as an example of consistent leadership to bring old sites to completion. EPA's Superfund Alternative Program, in contrast, is criticized, and a consensus recommendation urges that the Program be restrained to a small Headquarters-run pilot because of its lack of transparency and consistency; failure to follow the procedures, prioritization and due process protections afforded NPL sites and stressed in this report; and ad hoc selection and implementation.

Emphasis on solid, up-to-date data: Members from all perspectives constantly referenced the need for accurate, up-to-date information on site and community conditions. It is impossible to select for Superfund listing the highest priority sites and to develop reliable, effective and sensible remedial plans without accurate current data on health and environmental impacts. For this reason, the report repeatedly recommends that EPA seek available data from community members

and responsible parties early and often. The report recognizes the HRS's failure to provide risk characterization and stresses the need for corrective data on actual exposures and site-specific community conditions.

Fairness and accountability: The Subcommittee's discussions did not and were not intended to address Superfund's liability system, but a theme underlying our discussions was accountability. As the report states in the discussion of funding issues, "all Subcommittee members recognized the importance and value of a strong enforcement program that targets all – not just some – responsible parties, encourages proactive efforts by cooperative responsible parties, and discourages recalcitrance." Superfund is most effective in practice and as an incentive if it uniformly and fairly holds all parties responsible for their activities and if it encourages accountable parties to come forward by treating them fairly. This is the premise of EPA's fairness administrative reforms. They remain vitally important to a successful Superfund program.

Robust public discourse: The very fact of establishing a NACEPT Subcommittee on the Future of Superfund demonstrates EPA's commitment to understanding all perspectives and submitting to even the most critical public comment. All stakeholder groups were enthusiastically represented in this Subcommittee, and EPA did not shirk in its support of the group even when discussions were difficult or demanding on scarce agency resources. This openness is to be commended, as is the Assistant Administrator's commitment at the final Subcommittee meeting to continuing the dialogue and exchange of perspectives. Particularly in an era when politics tends to stereotype environmental policy discourse, EPA must have access to substantive, non-polemical dialogue and advice. I believe the discussions over the past two years and this Final Report represent just that.

Position Statement of: **Doris Cellarius**

Vice Chair, Environmental Quality Strategy Team
Sierra Club – Prescott, Arizona

I begin by giving my full endorsement to the comments of Jason White, which include the "Top 10 Issues To Protect Public Health and The Environment at Superfund Sites", and to the appended comments of Dolores Herrera, Lexi Shultz, Aimee Houghton, Vicky Peters, Ken Jock, and Grant Cope.

OVERVIEW—Although I fully support the NACEPT Report's excellent recommendations for EPA to direct increased attention and resources to tribal and environmental justice communities, I cannot sign the Report. It does not send a strong message about the serious need for more resources to address needs at sites where cleanup is stalled for lack of funds and the needs at increasing number of contaminated sites in this country. At the very least the program needs an immediate short-term funding increase of \$300 to \$800 million to protect communities at sites that have been delayed because of insufficient funding. Sierra Club will continue to advocate for restoration of the expired Superfund tax on users of the chemicals that have created Superfund sites by polluting the environment. And we will advocate for larger annual appropriations. If Congress is not provided with a list of all sites that qualify because of threats to health and the environment, it is not surprising that they don't vote for adequate funding.

I agreed to participate in NACEPT because I understood it was a consensus process and we would not have to put our name on anything we did not support. It was most disappointing that the Subcommittee almost reached consensus on some very important issues where true collaboration almost occurred. Most parties were willing to give up something for the common good, but the efforts of a few spoiled it. Some unidentified industry representatives could not even agree on a small temporary funding increase that would not involve reinstatement of fees or the tax! They were unwilling to give their names, a situation in sharp contrast to the openness of those who were willing put their names on funding recommendations in the "Top 10 Issues To Protect Public Health and The Environment at Superfund Sites".

My larger concern about attribution is the possible misuse of concepts in this Report where ranges of views are presented with no attribution. It will be impossible for EPA, as well as other readers, to know who or how many held these views. Such discussions could be misused to weaken programs and prevent qualifying sites from receiving attention. In many cases even consensus recommendations are followed by "some say this" and "some say that", a very confusing situation.

An example can be found in Chapter III. How would anyone know that it was industry "members that believe the Program's resources should be guided using assessments of risk and that EPA should increasingly use risk as a way to make decisions about NPL eligibility and to set priorities for spending"? I think this is a very bad idea and I refer you to the discussion of risk in the comments of Vicky Peters which point out the inadequacy of this approach.

All sites that qualify, regardless of the size or remoteness of the community, should be listed. Tribal residents and other affected communities must have early and genuine involvement, and financial support to facilitate their participation. TAG grants should be more easily obtained and they should also be made available to non-NPL sites. ATSDR and NIEHS should have to do more to share information at other sites and address the overall health impacts in affected communities. Accurate, comprehensive site hazard assessments, done in consultation with the affected community, are one of the most important determinants of what cleanup is needed.

OTHER PROGRAMS and MEGASITES—One of the most dangerous ideas discussed in the report is deferring sites that qualify for CERCLA oversight to other federal or state programs. I totally disagree with the industry view (Chapter III, "Different views on risk.") "the Superfund Program should first prioritize ongoing significant threats that require government funding for cleanup, and other environmental cleanup programs should be used to address less significant current threats and potential future threats, and should administer and oversee cleanups at sites where there are viable responsible parties." Leaving management of Superfund sites with viable PRPs to "other programs" that have weaker cleanup and liability provisions could remove CERCLA protections and standards from some of our nation's worst sites.

Unfortunately, this dangerous idea is one of the factors listed under Recommendation 1 for determining what other programs could be used suggests using redevelopment programs (Chapter III, "Likely outcomes of activities by other programs or PRPs"). It states: "Is or will another program appropriately address the site? The Agency should not use scarce Superfund time, attention, or funding when another program could appropriately address a site and has the capacity (funding and resources) to appropriately carry out site evaluation and cleanup or appropriately provide oversight of work funded by responsible parties. Such programs might include state or Tribal environmental programs, redevelopment programs, and other Federal programs, such as the Resource Conservation and Recovery Act program."

Superfund is not, and was not created to be, an economic redevelopment program. Although such programs might provide resources for cleanup, they do not provide the oversight, expertise, cleanup standards and other requirements of a CERCLA cleanup program. For this reason, NPL qualifying sites should not be "deferred" to redevelopment or brownfields programs. Resources and partnerships provided by such programs, where they may exist, can be adjuncts to the ultimate reuse of the site.

Early in our subcommittee's studies it was found that generally these other programs do not have the financial resources and capabilities to clean up these most serious sites (Chapter III, "NPL Candidate Sites not Proposed for Listing"). States are overburdened with multiple responsibilities and short on funds; the budget situation shows no sign of improvement. Funding programs provide small amounts of money to address sites that, in general, are smaller and less complex than NPL-caliber sites; although some funding might be available and appropriate to augment some NPL-caliber cleanups. In general these programs provide funding potential only, they do not provide a cleanup process or cleanup standards - these would have to be provided by another program, for example a state cleanup program.

"Some states may have programs that can better address some cleanups. However, we neither comprehensively assessed the capacities of state programs, nor is it likely that most state programs will be more protective of human health and the environment. In my own community I already see major parts of a site with a qualifying HRS score being parceled out to a state program with weaker procedures and standards, including those that address liability. They will lose EPA oversight, expanded investigation, and authorities, and the rest of the site may no longer rank high enough to be considered under Superfund. Although the Superfund NPL program is not the only program capable of appropriately cleaning up contaminated sites, contrary to the Report, ("Deliberations on Ensuring Consideration of and Coordination with Non-NPL Programs, last sentence"), under 42 USC 9628(b)(1)(B)(iii)(I), EPA can only exercise its enforcement authority at a site being cleaned up under a State response program if, among other unrelated conditions, "a release or threatened release may present an imminent and substantial endangerment to public health or welfare of the environment and additional response actions are necessary." - not wherever EPA determines that "non-Superfund programs are not acting appropriately."

States use combinations of voluntary programs, redevelopment assistance, and often weak "risk-based" cleanup standards, rather than the preference for permanence in CERCLA. They're all supposed to be "reasonably anticipated" uses, not current, though people don't seem to good at anticipating. Although EPA has not required permanence as often as it should, it is finding that this has been a mistake. Engineered and institutional controls fail, leading to spreading environmental damage and costly readjustments of the remedies. Protection of groundwater is also sometimes weaker.

Megasites need increased attention, comprehensive oversight, expert staff and improved decision-making. It is not surprising that very large sites have taken a long time for agreement on remedy and implementation of cleanup. The impact of these sites on residents, businesses and local government is huge in terms of public resources expended, lost tax base, and community values.

As one view in the Report correctly states, if megasites are parceled out to other programs instead of being listed as one large geographic area, communities will be denied the unified basis for participation in the evaluation and cleanup of all the contaminants and hotspots in the area. The many benefits of a more comprehensive investigation, public visibility, availability of TAG grants, implementation of technologies, and support from the businesses in the community will be lost if the site is divided.

Based upon site-specific data, it might make sense to list releases within a large site separately, as is sometimes done with operable units within a large Superfund site. The danger is that dividing a site might expedite cleanup of simpler problems, but delay (sometimes indefinitely) cleanup of the more difficult parcels.

Another reason to not limit clean up to "hotspots" or small parcels is that this evades EPA's current policy, which is to NOT consider incremental reduction of risk from removals or PRP cleanup standards in determining whether a site should be listed on the NPL. This provision is to ensure that sites that would qualify as a national priority are cleaned up in compliance with CERCLA standards, and do not fall off the table because just enough clean up occurs to result in the site no longer scoring 28.5.

Federal facilities sites are generally very large, with huge risks and costs of cleanup. Effective public involvement is often difficult to achieve because of the disempowering style of the federal government. The progress of cleanup is also significantly less. Unique issues related to these facilities warrant a focused dialogue on issues arising since 1996.

Position Statement of: **Grant Cope**
Attorney, Earth Justice

Summary: I dissent from the report because defects in the process, precipitated by EPA and Subcommittee management, helped to infuse the report with statements that officials may use to severely weaken Superfund's ability to protect public health and environmental quality.

Since the beginning of the subcommittee process, the operating policies included a process that promoted consensus recommendations and an array of five different ways that a "range of views" could be represented in the absence of consensus. During the final stages of the process, EPA and Subcommittee management dramatically changed these policies. In the fall of 2003, EPA began to express its desire for non-consensus statements, as well as consensus recommendations, and stated that the agency would seek to exercise greater discretion in implementing policies based on a "range of views." In the final days of the Subcommittee's existence, its management chose not to attribute views to individual or groups of representatives. These changes promoted extremist positions that could weaken vital protections in the Superfund program. Therefore, I dissent.

The following describes proactive policy recommendations that the Administration should endorse and work to implement in order to increase protections for public health and environmental quality in the Superfund program. Consistent with these recommendations, I hereby endorse the "Top Ten Issue to Protect Public Health and the Environment at Superfund Sites" included in the comments of Jason White. I also endorse the views of Lexi Shultz, Doris Cellarius, Aimee Houghton, Dolores Herrera, Vicky Peters, and Ken Jock. I also wish to thank EPA, other representatives on the Subcommittee, and individuals who talked with the Subcommittee for contributing their time, talent, and thoughts during this process.

Make Polluters—Not Innocent Taxpayers—Pay To Clean Up The Nation's Most Heavily Contaminated Toxic Waste Sites: The Administration and Congress should approve and sign into law a reauthorization of Superfund polluter pays fees, which expired at the end of 1995, with increased authorizations and appropriations to ensure that public health and environmental quality are protected at dangerous toxic waste sites across the country. Presidents Reagan, George H.W. Bush, and Clinton endorsed reauthorization of Superfund's polluter pays fees, but the current Bush Administration has not supported their reauthorization.

As referenced in the NACEPT, Congressional, EPA, and independent reports demonstrate that Superfund is currently under-funded by \$300 to \$800 million dollars per year. This figure does not include the years of under-funding that have created a backlog of needed clean up activities and lost opportunities to address threats. Comparing the baseline and high estimates of funding needs provided by the Congressionally requested study written by Resources For the Future and the Superfund past appropriations, the program has experienced a funding deficit of between \$2-3 billion from 2001 to the levels of funding requested in 2005. The end result: public health and environmental quality suffer.

The purpose of Superfund is to protect public health and the environment from hazardous substances at highly contaminated toxic waste sites. In order to accomplish this purpose, the Superfund program needs resources. When Congress enacted Superfund in 1980, it gave the Superfund program two methods of obtaining needed resources. First, Superfund has liability provisions that make potentially responsible parties ("PRPs") liable for cleaning up a site. If a PRP refuses to clean up a site and EPA expends money to remediate a site, PRPs are liable for EPA's clean up costs, plus, potential penalties for refusing to clean up the contamination. Second, Congress enacted fees on the purchase of chemicals often found at toxic waste sites, petroleum, and a small levy on profits in excess of \$2 million for some big corporations. In exchange for the fee on petroleum sales, Congress gave oil companies a liability exemption for petroleum contamination at Superfund sites, meaning that EPA cannot hold polluters liable under for petroleum contamination.

These "polluter pays fees" provide the foundation for Superfund's ability to protect public health and environmental quality in five important ways. First, the fees provide a stable source of funding that

is not dependant on uncertain annual appropriations from taxpayer funds, or “general revenue.” This point is critical because, generally speaking, annual appropriations from general revenue for domestic programs are capped at certain levels, which means that Congress will only spend a set amount of money annually on such programs. Therefore, Congress must pay for increased appropriations for one program by reducing money going to another program. However, the polluter pays fees allow Congress to increase money going to Superfund cleanups without necessarily taking resources away from other programs. Congress does this by relying on money from fees that build up over time. This system ensures that the government can help protect communities threatened by toxic waste sites without taking money away from programs that provide people with safe drinking water, clean air, clean water, and better enforcement of other public health and environmental protections. Stable funding also promotes long-term management options at Superfund sites, which is critical because EPA may need several decades or longer to clean up heavily contaminated sites.

Second, the federal government appropriates money from collected fees to pay for EPA clean up activities when PRPs refuse to undertake such action, cannot be located, or are bankrupt. When EPA spends resources to clean up a site, the agency can recover such cost from PRPs connected to that site. These cost-recovery funds go back into the Superfund program to fund more cleanups.

Third, the fees provide EPA with a stable source of funding that is essential for a strong Superfund enforcement program. This enforcement program helps to expedite cleanups at Superfund sites and increases the capacity of other federal and state clean up programs. For example, if a PRP is being intransigent at a Superfund site, EPA can either clean up the site—if the agency has the resources to undertake such an action—or it can issue a unilateral administrative order to the PRP directing it to undertake clean up activities. However, the effectiveness of EPA’s order authority is directly tied to the availability of EPA resources, since PRPs know that EPA’s order is only as good as the amount of money behind it. While EPA can also request that DOJ seek judicial enforcement of an order, there is no guarantee that DOJ will prioritize such requests over other matters; in addition, litigation over orders could delay cleanup for years as the parties argue over the reasonableness of the selected remedy.

A strong enforcement program under Superfund also benefits other federal and state cleanup programs. When PRPs are being intransigent, representatives of other programs can provide the option of negotiating in good faith or dealing with EPA’s Superfund program. The threat of an EPA cleanup order or site listing provides polluters with a powerful incentive to negotiate in good faith.

Fourth, the fees promote pollution prevention activities, by shifting cleanup costs to industries and products associated with the creation of toxic waste sites. This uses the market to promote environmentally sensitive products and companies. Industries can continue to produce polluting products, but they generally choose to pass those costs onto customers, creating a comparative advantage for environmentally sensitive products that do not harm the environment or public health. Additionally, the fees also help ensure that funding for other public health and environmental programs are not reduced, thereby contributing to pollution prevention efforts under other programs.

Fifth, EPA also provides states with grants to increase the capacity of state and tribal clean up programs. These resources are critically important to ensuring that states and tribes can effectively address toxic waste sites in communities across the country. Unfortunately, these resources – especially for tribes—a have declined in recent years. At the same time, the economic downturn has resulted in budget cuts in state clean up programs.

The Administration’s failure to endorse and Congress’s failure to reauthorize Superfund’s polluter pays fees has contributed to a dramatic slowdown in the pace of clean up at the nation’s most heavily contaminated toxic waste sites. The Report mischaracterizes the GAO’s findings on the interplay between funding levels and taxes. Rather, as pointed out by the Congressional Research Service: “[w]hen the taxes expired, the Fund had an unobligated balance of nearly \$4 billion, and, even after expiration of the taxes, money continued to be added to it from interest payments, costs recoveries, and other sources. Thus, the lapse in taxing authority *initially* had little effect on the ability to fund the program.” *Emphasis added.* (CRS-3). Once the surplus was depleted, funding levels began to drop. In addition, the agency provided no data or explanation for the precipitous drop of construction completions from 2000-2001. It is worth noting that EPA informed the

Subcommittee that the agency's budget was cut \$100 million in that year, and that amount was never restored.

The Bush Administration should stop protecting the profits of polluting industries and start promoting protections for public health and environmental quality by calling for reauthorization of Superfund's polluter pays fees. Congress should enact reauthorization of Superfund's polluter pays fees. The tens of millions of Americans—including millions of children—who live near Superfund sites and millions of other people who work and recreate near sites deserve no less.

Industry's Orphan Share Funding Proposal Aids Polluters And Weakens Protections: I fully supported a modest, compromise recommendation for short-term funding for the backlog of remedial actions that are awaiting funding. Unfortunately, industry representatives stymied a consensus. These members insisted that any additional funds be spent only on "orphan shares" at Superfund sites. This restriction would exclude funding for cleanups in communities near some Superfund sites, and prioritize expenditures of these funds based on the potential financial status and availability of PRPs, not the threats posed by toxic waste sites. It would also violate Superfund's existing provisions that require EPA to recover costs from PRPs or their insurance companies, and thereby undermine Superfund's liability provisions (42 U.S.C. § 9622(b)). Lastly, it would encourage the destructive practice of attaching Congressional "environmental riders" on EPA appropriation legislation, and signal a lack of support for the CERCLA liability provisions that form the foundation of the Superfund program.

Currently, EPA uses "orphan shares" to describe the amount of money that the agency will credit (i.e. not seek to recover) to PRPs at a site based on EPA's assessment that certain non-viable PRPs are or may be responsible for a set amount of the contamination. Industry representatives wanted EPA to initiate a new process of formally designating certain sites or parts of sites as "orphan shares". This restriction could force EPA to forgo recovering costs against PRPs or their insurance companies, in order to use the money to clean up contamination, likely benefiting PRPs that EPA has not yet found or intransigent parties who argue that a cleanup is too expensive and who point the finger at other entities. A relatively minor contribution at a large site could fund an entire investigation or design at a smaller site. Apart from the fact that such a practice is contrary to law, relinquishment of the right to cost recover is bad policy.

Funding And Conflicts Of Interest: The Subcommittee was correct to examine how the lack of funding is adversely affecting EPA's ability to list and cleanup sites and meet the agency's goals for the program, and to attempt to remedy the situation. Some members of the full NACEPT Committee have questioned whether this examination was appropriate, since certain Subcommittee members might indirectly benefit from increased funding. However, members of the full NACEPT Committee also expressed interest in the Subcommittee examining funding issues early on in the Subcommittee's process. Moreover, the failure to obtain additional funding has a direct benefit to PRP's on the panel. An underfunded program poses less risk of enforcement and less pressure on PRPs to perform thorough and timely cleanups.

Inappropriate Measures That May Weaken Cleanups: The Report's appendix inappropriately includes a reference to weak RCRA-type measures to consider in measuring program performance, such as controlling—but not necessarily cleaning up—human exposure to contamination and the migration of contaminated groundwater. These measures could weaken protections by driving staff to simply contain toxic waste and use institutional controls, rather than directly cleaning up the pollution. These measures could weaken EPA's application of Superfund's preference for permanent treatment and vigorous application of strong clean up standards. Moreover, experts, communities, and EPA often debate whether contaminated plumes of groundwater are moving or all pathways of exposure are closed. EPA's measure of success should be based on objectively verifiable steps that are related to EPA's process of cleaning up Superfund sites, such as construction completions.

Position Statement of: **James Derouin**
Attorney, Steptoe & Johnson, LLP

I enjoyed the experience of serving on the Superfund Subcommittee and feel that the final report provides a good discussion of (a) the Superfund Program and (b) the pros and cons of a number of important issues that relate to it. I think that the Subcommittee leadership was excellent and the facilitation was very professionally and competently done. EPA provided a wide variety of useful information. In addition, senior EPA personnel provided excellent insights into the Superfund Program at smaller, work group size meetings. The competence of EPA personnel was impressive and reassuring. I do, however, have some observations about the process and certain issues contained in the report.

The Subcommittee Process.

The process started out as a consensus effort; unfortunately, it didn't stay that way. I have been involved in the environmental consensus process for 30 years. To get something done, the process needs to find areas of commonality; that's the challenge. In my opinion, several factors combined to thwart producing a report with a greater range of consensus recommendations.

- The Subcommittee's mandate involved three issues--i.e., measuring program progress, management of megasites and the role of the National Priorities List. In the middle of the process, the mandate was expanded to include funding. In my opinion, progress had been made on the original Subcommittee agenda. When program funding was added to the agenda, it had a "whip lash" effect--i.e., it changed the focus of the Subcommittee process and consumed its energies from that point forward.^A
- The demand/expectation for consensus was eliminated, perhaps because of lowered expectations resulting from what could be viewed as hostility toward EPA exhibited by some parties. Regardless, this, too, had a "whip lash" effect. Once this decision was made, momentum for broad consensus stopped and the process slid inevitably into explaining/validating disparate views.

In terms of "lessons learned," the Subcommittee process reaffirmed my belief that in order to produce consensus, you need to demand it, there has to be active facilitation and there needs to be a commitment to the process by all parties. In this case, there was, in the beginning, an atmosphere of great suspicion about the "agendas" of Subcommittee members. In addition, some parties were suspicious of even the slightest change in the status quo. But hard work and lots of discussion prevailed--and led to the Subcommittee report. In my opinion, however, an opportunity for a broader, useful consensus was lost.

Program Funding.

There is no agency in the federal government that has all the money it wants. The question, however, is whether an agency has all the money that it needs. A twin issue is whether it is spending efficiently the money entrusted to it. There is a mentality in some sectors that efficiency is not applicable to the Superfund Program; that, because of the noble purpose of the Superfund, it should be funded on a "sum sufficient" basis. Unfortunately, that is an unrealistic expectation.

Another complicating factor is that an entire service industry, both inside and outside government, has built up around the Superfund Program. State programs rely on federal funding. Studying sites has precedence over remediating sites. The mentality that the Superfund Program is an entitlement has become prevalent. EPA is under constant pressure from multiple sources to turn

^A For example, the study done by Resources For the Future ("Superfund's Future: What Will It Cost?") was advanced as a basis for a recommendation for increased program funding. That study speaks for itself. There was no reason to "reinvent the wheel" by imposing a discussion of its findings on the Subcommittee because, except as background, it was irrelevant to the original charge of the Subcommittee.

the Superfund Program into a public works program. If the Program ever comes to encompass river and harbor reconstruction, it will become just that—at a cost of multiple trillions of dollars. In other words, there is no amount of money sufficient to meet the political, technical and legal demands that are being made on the Program. To cope, therefore, requires a sense of reality along with efficiency and prioritization.

Expenditures Must Be Prioritized Throughout The Superfund Program.

Sites, or portions of sites, that pose actual human health risks/exposures must be the Superfund program's top priority. "Worst First" must become a part of the prioritization process regardless of all pressures to the contrary resulting from the competition for funds from regions and states. Bona fide threats to human health must have priority and must, always, be provided necessary funding. If, in this context, inadequate funds exist, emergency, temporary and targeted funding should be sought. However, the concept that all sites are created equal, and that all parts of megasites pose the same risk, is wrong. The inability to spend, up front, all the money needed on a project always creates inefficiency. However, there are always limits on funding. The interstate highway program was built in steps; in fact, no highway exists that has not been expanded after it was originally constructed. The defense department is subject to phased spending. If individuals could afford to buy their houses without mortgages, their total cost would be less. Based on the reality, therefore, that funds will always be limited, prioritization of spending is critical.

EPA has, for some time, had a prioritization system for allocating dollars for remedial actions. That process should, based on the principles set forth in the report, be applied to prior steps in the Superfund pipeline, including NPL listing decisions. The lack of precise and perfect information at earlier stages in the Superfund process should not be used as an excuse for the failure to make difficult decisions. I concur with the principle that "perfect should not be made the enemy of better." The prioritization process, however, should not be so cumbersome that decisions can never be made. Such gridlock does not invite increased funding.

EPA Headquarters Must Retain Listing Authority.

EPA must be accountable for the funds entrusted to it. EPA cannot be held accountable, however, if it does not retain authority over listing and spending decisions. More specifically, EPA Headquarters must retain final authority to make NPL listing decisions. Those decisions cannot be delegated to either the regions or to the states. Superfund decisions require complex, balanced decisions that should not be submitted to a "round table" process in which decisions are made by those with a vested programmatic interest in the outcome. EPA can be held accountable only if it, at the headquarters level, retains the authority to make final decisions to assure national consistency and the allocation of funds to national priorities. Part of management, oversight and accountability is the prioritization of funding; and the NPL listing mechanism is an important part of the management process.

Remediation Must Become Superfund's Priority.

More resources should be directed, as a percentage of overall funding, toward bona fide "bricks and mortar" remediation. The decline in such funding is unacceptable and should be reversed. In addition, although there are dozens of studies and initiatives mentioned in the report, it would be counterproductive to allocate significant resources to these studies while, at the same time, remediation funding is decreasing. The best evidence for additional funding is the wise, efficient use of existing funds. Directing funds toward personnel and studies instead of the actual remediation of sites, or portions of sites, that pose human health risks/exposures is counterproductive. Spending more money is not a measure of program progress; spending money better is.

Megasites Must Be Conceptualized Better; Otherwise They Will Sink Superfund.

The Subcommittee spent considerable time, unsuccessfully, discussing a definition for what constitutes a "megasite." The fact is that some sites confronting EPA cover a large area, include multiple sources of release and pose funding challenges to the Program. Scrutiny of the current program demonstrates that a large share of annual remediation costs is today consumed by

relatively few sites. That may be the way that it should be. But it also suggests that megasites require special management and listing attention. The mere listing of a geographically large site on the NPL should not dictate that all portions of the site receive the same priority for funding unless it can be concluded that they also pose the same degree of risk to human health. Megasites must be viewed, wherever appropriate, as a composite of multiple release sources whose risk to public health must be individually assessed.

Position Statement of: **Steve Elbert**
Senior Vice President
BP America, Inc.

I appreciate the opportunity to participate in this Superfund Subcommittee, and would like to thank the other members of the Subcommittee for sharing their experiences and ideas in this process. EPA graciously responded to our many requests for detailed information about the Superfund program, and the facilitators at Meridian/Ross should be commended for their efforts to identify consensus where possible, and to summarize the diverse range of views on issues where there was no consensus.

Throughout these deliberations, we were often reminded that Superfund resources are limited, and that EPA program managers, like other business managers, need to accomplish a great deal with a limited budget. Recommendations 1, 2, 3 and 7 in this report share a common theme: they suggest that EPA could make greater use of private party and other program resources at many sites. In these comments I want to expand on that theme, and suggest a number of steps that EPA could consider to implement these recommendations.

As the report explains, when a site can be cleaned up in a timely and effective manner under another program, it is not an optimal candidate for the Superfund program. EPA recognized this in the 1980's, when it stated that cleanup at RCRA permitted sites should be conducted under the RCRA program to the extent possible. In later guidance, EPA recognized that cleanups in progress at state sites should continue to be handled by the states to the extent possible. We believe EPA should extend this policy to sites where parties seek to begin work under these and other cleanup programs, and should issue guidance to ensure that regions consistently evaluate and make good use of the resources available under other programs. Rather than using the Superfund program to address every NPL-caliber site (as some Subcommittee members have suggested), we believe EPA should look to the program's original purpose, and use the Superfund as a "safety-net" to catch those NPL-caliber sites that cannot be adequately addressed by other programs and by private funds. To make maximum use of other program resources, we suggest the following additional steps:

1. Provide essential information to interested parties before a site is placed on the NPL. In our experience, EPA does not consistently seek input from potentially responsible parties (PRPs) at the earliest stages of the investigation and cleanup process. As a result, we see sites where EPA has used Superfund resources to perform investigation, removal or remedial work that could have been performed by PRPs with private funds.

In order to make maximum use of available resources, EPA needs to reach out to other stakeholders earlier in the process, before it places a site on the National Priorities List (NPL), while there is still an opportunity to take action under a variety of cleanup programs and use private funding to perform the earliest stages of work. Before proposing a site for the NPL, we suggest that EPA should send each major PRP a detailed notice letter describing the site, the contamination, and the names of other PRPs. At the same time, EPA should allow all interested persons to review and copy detailed information in EPA's files about site conditions, contamination (type, location, alleged sources), PRP lists, and each PRP's alleged connection to the site. Many NPL-caliber sites are large, complex sites that involve multiple PRPs who are unaware of the other parties' activities. At these sites it is not realistic to expect one PRP with a small share of the waste to voluntarily accept liability for the waste of hundreds or thousands of other parties, based on minimal information. When given sufficient information, however, such PRPs can and in our experience usually do form a group to fund some or all of the work needed at the site. Sometimes we've found it difficult to get essential information before a site is placed on the NPL, as it is common for EPA to withhold information for possible use in future enforcement litigation, and to insist that such information be obtained through a Freedom of Information Act (FOIA) process that can take years to complete. However, these practices deprive other agencies and PRPs of data at a critical point in time, when they need it to develop a plan to address the site under another program, without draining Superfund resources. To take full advantage of the capacity that resides in other programs and among groups of PRPs, EPA needs to share its data with these

stakeholders. EPA should automatically and consistently make the above data available to all interested persons before placing a site on the NPL.

2. Establish a reasonable amount of time to develop and consider proposals for voluntary cleanup or further action. Once a potential NPL site has been identified, in our experience it takes several months to develop a viable proposal to investigate and respond to that site. Some Subcommittee members viewed this as a troubling source of delay. However, over the last five years the median time between the date when a site is proposed for NPL listing, and when it is actually listed on the NPL, has been about 5 months.^B This suggests that at most sites there is sufficient time for EPA to evaluate proposals for voluntary cleanup under a variety of programs. If a site requires immediate action, EPA could conduct emergency work as a Superfund action, while it continues to evaluate proposals for additional work under other programs.

3. Develop consistent criteria to evaluate proposals for voluntary cleanup. EPA's ultimate goal is a prompt and effective response action that protects human health and the environment. In deciding how to achieve this goal, we believe that EPA should take full advantage of the resources available in other cleanup programs, considering the following factors:

- Whether agency staff in another cleanup program are willing and able to oversee the necessary work;
- Whether that other cleanup program has, in the past, achieved remedies that protect human health and the environment;
- Whether funding is available for the proposed work. Most work will be performed and paid for by private parties, but other funding sources should not be overlooked (such as funds for redevelopment or dredging of navigation channels under WRDA);
- Whether the proposal will provide adequate opportunities for public participation and comment at those sites where there is significant public interest. At many sites the parties must comply with the public comment provisions in the National Contingency Plan (NCP) in order to bring a contribution action against recalcitrant parties under CERCLA Sections 107 and 113. In addition, some programs contain their own public comment requirements. Where neither of these conditions applies, and there is significant public interest in the site, our company has entered agreements with the oversight agency to create a public participation process suited to the specific needs of a site.

4. Consider the use of a Coordinating Committee or similar group on a pilot basis. Other agencies are often in the best position to evaluate proposals to handle sites under other cleanup programs. Representatives from other programs are able to draw on a wide range of program experience and insight that can be used to develop thoughtful and balanced advice regarding the pros and cons of each program option.

During the Subcommittee's deliberations, I chaired a Work Group that considered whether a multi-agency coordinating committee could help EPA make sound NPL listing decisions. EPA may want to consider testing that concept on a pilot basis. Mega-sites are especially good candidates for a pilot project because they often cover large geographic areas that contain many potential sources of contamination, and while these might be addressed as a single mega-site covering hundreds of square miles, it might be better to address them as a series of smaller sites tied to specific contaminant sources, possibly under more than one cleanup program. A multi-agency committee could advise EPA on the cleanup programs that are best able to address portions or all of the proposed mega-site, considering each program's capabilities, funding, staffing and limitations.

Potential members of a coordinating committee might include staff from federal and state programs that have an interest in the contamination at the proposed mega-site, as well as at least two members from EPA headquarters who can provide a national perspective and level of consistency, and a neutral person to chair or facilitate the discussion.

The committee would review relevant data, including contaminant sources, locations and levels; whether there are high risk areas that should be prioritized for action first, before other areas of

^B We ran a quick analysis of the time it took for a site to move from proposal to final listing for the 146 sites listed on the NPL between January 1997 and April 2002. The average time was 297 days, and the median was 149 days.

lower risk; and proposals by private parties to perform or pay for some or all of the work. It would evaluate a range of cleanup programs, and consider how those programs might work together, if needed. If the committee could not agree on a recommended course of action within an allotted time, it could offer the pros and cons of each option to EPA for consideration, as the Subcommittee has done in this report. It could consult a checklist of relevant criteria to ensure it weighs appropriate factors and provides a sound analysis of them to the Region for review. The Region would then exercise its discretion to decide whether to propose the site for NPL listing, based on input from the committee and other stakeholders who file comments. EPA headquarters would continue to review these proposals to bring a national perspective and consistency to the process. In all cases, we believe the Assistant Administrator should retain her authority and discretion to make the final NPL listing decision.

I believe these proposals would reduce the number and size of sites that end up on the NPL in the future, and would allow EPA to focus its Superfund resources on a smaller universe of sites that have no other options. This should allow EPA to spend more money cleaning up those sites that need to be on the NPL. If EPA or any other stakeholder is interested in further discussion of these ideas, or any other issues raised by the Subcommittee's report, I would be happy to participate in such discussions.

Position Statement of: **Jane Gardner**
Manager & Counsel, Remediation Programs
General Electric Company

GE appreciates the opportunity to have participated in the NACEPT Superfund Subcommittee and its deliberations on how to improve the Superfund program. GE also appreciates EPA's willingness to "take stock" of the Superfund program with a view toward identifying changes that would improve the program and make better use of the significant financial expenditures by EPA and PRPs. While the Subcommittee's discussions were often vigorous, most of the participants listened to other points of view, considered the views of others in order to reach compromises, and support this final Report. GE's comments are a result of this effort to reach compromises with other stakeholders. GE thanks EPA for the opportunity to participate, and Meridian and Ross & Associates for their helpful direction and mediation.

As one of America's oldest and largest companies, GE is, and has been, addressing under Superfund and other cleanup programs multiple sites that were created long before Superfund was enacted. GE has spent more than \$1 billion to remediate sites since 1990, and now spends approximately \$150 million dollars per year on remediation activities. As a result, GE has a significant interest in making sure that money spent to remediate sites is spent efficiently and effectively, and provides the maximum benefit for the expenditures. In addition, given the maturity and size of GE's remediation program, GE has acquired broad, hands-on experience with virtually every phase of remediation efforts under both Superfund and other state and federal remediation programs. The virtually unparalleled depth and breadth of GE's experience particularly informs GE's input on 2 of the 3 questions in EPA's charge to the Subcommittee: (1) the role of the NPL in the context of other cleanup programs; and (2) how to handle the special challenges posed by "mega" sites.

Through experience, GE has found that the success of Superfund turns on two fundamental questions: what are the realistic risks to human health and the environment posed by contaminated sites, and how can those risks be reduced to acceptable levels most efficiently and effectively? The current risk assessment process does not adequately distinguish between realistic risks (current and future) and hypothetical risks (current and future). Many stakeholders believe that EPA's risk assessment practices rely too frequently on unwarranted, conservative, "worst case" assumptions that distort the outcomes of risk assessments, and do not result in an accurate analysis of the actual risk posed by a site.^c EPA should reform the HRS to adequately identify actual, realistic risks. EPA then should prioritize sites based upon the results of that effort, with the sites that present the most serious risks to be addressed first, and commit both public and private funds in accordance with that prioritization.

GE has repeatedly observed that cost-effectiveness and cost-benefit considerations are virtually absent from the Superfund program, despite the fact that EPA and other federal and state agencies routinely make decisions based on those considerations. To avoid misinterpretation, it must be made clear that GE does NOT believe that only current risks should be addressed under the Superfund program or elsewhere. To the contrary, GE believes that if sites were evaluated based on realistic current and future risks, as opposed to hypothetical current and future risks, more funding would be available to address more sites and protect more people and more of the environment.

GE is disappointed that the Subcommittee did not reach consensus on the appropriateness of risk-based metrics as the vehicle for decisionmaking and priority-setting in the Superfund program. Through the years, policymakers have emphasized how important it is that the Agency use risk-based approaches to ensure that EPA spends its limited resources wisely, both within and across programs. See, e.g., Reducing Risks: Setting Priorities and Strategies for Environmental Protection (1990) (Scientific Advisory Board; <http://www.epa.gov/history/topics/risk/01.htm>); "Setting Priorities, Getting Results: A New Direction for EPA", pp. 2-3(Natl Academy of Public

^c See generally, "An Examination of EPA Risk Assessment Principles And Practices", EPA/100/B-04/001 (Mar. 2004).

Administration, 1995)("EPA should . . . [u]se comparative risk analyses to inform the selection of priorities and the development of specific program strategies").

Despite the Agency's progress in successfully applying risk-based tools to improve environmental performance in many programs, the Superfund program remains rooted in the past, relying, as it does, on an incomplete hazard assessment tool (the HRS) that was developed in the early days of the program. EPA's skewed use of inappropriate exposure assumptions, and failure to link actual exposure to health threats, has generated a process that addresses all risks almost equally, and because of this, EPA rarely makes decisions in the remedial process that focus limited funding (both federal and private) on the realistic expectation that a contaminant will cause near term health or ecological problems unless action is taken. Rather, EPA assumes that regardless of funding limits, particularly for privately funded sites, all risks, realistic and hypothetical, current and future, must be dealt with simultaneously under the Superfund program. This position fails to allocate money to where it is needed most, fails to consider how to get the most risk reduction with limited dollars, and encourages significant dispute and delay with private parties and other stakeholders. GE recommends that EPA reconsider how risk is evaluated, make tough decisions that recognize limited budgets, and commit Superfund dollars to the most critical sites where there is current exposure or realistic expectations of additional risk in the short term (i.e. linked to actual exposure and dose), and then provide an "off ramp" for long term future risks to be managed under other federal and state programs better suited to deal with these issues. This approach would preserve Superfund monies for sites and exposure paths that cannot be addressed by other programs or by private parties, and that need immediate action with the full force of Superfund resources.

GE recognizes that evaluating the relative risks posed by potential Superfund sites is not an easy task, nor a non-controversial one. The Agency now has 25 years of experience in undertaking risk-based evaluations, however, and the Superfund program should be taking advantage of that experience. Toward that end, GE believes that EPA should revisit the essential building block of the Superfund program – the Hazard Ranking System -- and make it a more meaningful tool for identifying sites that pose the most serious risks to human health or the environment. In addition to collecting information about the toxicity of materials in potential Superfund sites, a revised HRS should identify, based upon site-specific data, the realistic exposure risks that prospective sites pose to neighbors and to the environment.

Likewise, EPA should devote additional up-front investments in data gathering and evaluation of those "mega" sites that are threatening to overwhelm the limited resources of the Superfund program. The stakes involved in mega sites are too high to take analytical short-cuts, forcing EPA to "fly blind" without information regarding which aspects of mega sites pose the highest risks and should be addressed first under the Superfund program. Having better information and "good science" about mega sites also will enable EPA to be more creative in how these sites are addressed. As the Subcommittee's mega sites work group discussed, it might be more efficient to address geographically diverse mega sites under a number of authorities and agencies – whatever can get a timely job done cost-effectively. It is difficult to sensibly deploy alternative cleanup options, however, in the absence of good information about the nature and scope of the threat posed by mega sites.

GE would like to emphasize a related point regarding the increasingly important role that non-Superfund programs are playing in the cleanup of contaminated sites. When Administrator Whitman addressed the Subcommittee, she emphasized that today's Superfund landscape is far different than that faced by EPA in the 1980s, when Congress launched the Superfund program. Today, many cleanups are proceeding outside the Superfund program, under robust federal programs (such as the RCRA corrective action program; the Department of Defense's multi-billion dollar cleanup program; Interior's abandoned mines cleanup program; the Brownfields program; the Corps of Engineers' Great Lakes Initiative, etc.) and state programs (including, in particular, state oversight of many private, PRP-financed cleanups). Administrator Whitman asked the Subcommittee to put the Superfund program in the context of this new reality, and to help the Agency take full advantage of the multiple cleanup programs that are now handling many cleanups throughout the nation. GE agrees that many other remediation programs have matured and are capable of handling sites that are currently on the NPL, thus preserving the limited Superfund funding as a "last resort" for those sites that otherwise would not be addressed. The Superfund program must become the program of last resort, not remain the program of first resort.

The report's characterization of funding shortages is misleading in at least two important respects. First, although not acknowledged in the report, an estimated 70 percent of cleanup dollars under the Superfund program historically are expended by private parties – and not through federal appropriations. Thus, while federal funding of the program is an important aspect of the Superfund program, it is not the primary financial driver of cleanup – most cleanup dollars come from PRPs.

Second, the Superfund program no longer “occupies the field” when it comes to cleanups. Much of the most interesting and innovative cleanup work is occurring in cooperation with community development projects (brownfields sites), and in the RCRA and DOD cleanup programs – cleanup programs that appear to be ahead of Superfund in terms of employing risk-evaluation techniques and streamlined, but protective, cleanup approaches. Likewise, as noted above, many states are overseeing major, NPL-caliber cleanups with PRPs. The preference of many states and PRPs to proceed outside EPA's Superfund program is evidenced by the substantial cleanup activity that is occurring under other authorities, and demonstrates that the Superfund program has much to learn from other cleanup efforts.

GE is hopeful that EPA will take the work of the Subcommittee, and take a fresh look at how EPA can improve the Superfund program to make it more responsive to our nation's cleanup needs. We encourage the Agency to review the full range of views presented in the Subcommittee's report, and take advantage of this unique opportunity to make needed reforms to the risk assessment process to maximize benefit to as many people and sites as possible.

Position Statement of: **Glenn Hammer**

Vice President, Environmental Health and Safety
Ashland, Inc.

On behalf of Ashland Inc., I would like to thank Assistant Administrator Marianne Horinko for her thoughtfulness and foresight in establishing the NACEPT Subcommittee on Superfund. Her attempt to address the problems with the program and identify potential solutions through an inclusive stakeholder process was a great idea. I would also like to thank the Chair of the Subcommittee, the facilitators for working through some tough issues and the EPA staff for providing information and insight. The Subcommittee worked diligently over the last twenty-two months to find common ground on extremely difficult Superfund matters. In the end however, it was difficult for some people on the Subcommittee to keep an open mind and get to "real change" - change that would have provided for additional funding for specific sites and acceleration of the pace of cleanup at others. Superfund will be incrementally improved if the recommendations in the final report are implemented, but much more could have been accomplished by this Subcommittee.

The charge of the Subcommittee from both the Deputy Administrator and the Assistant Administrator was clear and straightforward. We were asked to deliberate and make recommendations on the role of the NPL, the handling of mega-sites and improvements in measures to gauge the performance of the program. We were also encouraged to confine our discussions to current statutory mandates and not to discuss or make recommendations that would require legislative action. While in the ordinary course of a subcommittee's work it is normal to sometimes stray somewhat from the charge, this Subcommittee seemed to stray more than I would consider normal. The facilitators should be commended for their attempts to find consensus.

Superfund – Federal Waste Clean-Up Program of Last Resort

Personally I think that enormous progress has been made in the remediation of hazardous waste sites in the nearly twenty-five years following enactment of the statute. There are other federal and state programs that are now able to assist in either the funding and/or management of these sites. It is therefore totally appropriate for Superfund to be on the decline in terms of funding and the addition of new sites to the program.

Superfund should be the federal waste cleanup option of last resort, a safety net, turned to only when its stringent liability requirements, complicated remedy selection, continuous oversight and community participation are needed and when other available programs do not suffice. Assistant Administrator Horinko certainly recognizes this evolution in waste cleanup programs as evidenced by her forward thinking One Cleanup Program. This program of applying a range of tools available to federal and state agencies provides cleanup solutions that are less costly and just as effective and timely in the protection of human health and the environment.

Funding

Having noted the difficulty in getting to "real change" and anticipating that some Subcommittee members will likely continue to ask for increased funding and for a reauthorization of the corporate and excise taxes for the trust fund, it becomes important to bring some clarity to any discussion of funding.

- First, well over seventy percent of the costs of Superfund cleanups are paid by private responsible parties. Contrary to what some might think the polluters are paying, and, in many instances, more than their fair share! In fact, most of the sites being added to the list today are orphan sites. If there is no viable responsible party, it is totally proper for these agency lead sites to be paid for from appropriated funds from general revenues.
- Second, there is absolutely no correlation between the size of the annual appropriation for the Superfund program and the revenues residing in the trust fund. In spite of what some people think surrounding the taxing and funding issues, there is no compelling reason to reauthorize the taxes or to substantially increase funding for the program.

Statutory and Regulatory Reforms Are Needed

While discussions of legislative changes were not part of the Subcommittee's charge, I would like to take this opportunity to make several comments pertaining to statutory improvements that should be considered.

- The liability provisions of CERCLA should be amended to provide for fair share allocation in which Potentially Responsible Parties (PRPs) only pay for their fair share of the cost of cleanup.
- CERCLA should be amended to make Superfund cleanups more risk based. The Hazard Ranking System (HRS) should be based on the relative risk posed by a site. In addition, the public should be better educated about the risk assessment process.

In addition to potential legislative reforms, I believe that some significant reforms could be made under current statutory authority which were not discussed by the NACEPT Subcommittee.

- EPA regions differ in their support to PRPs in pursuing non-cooperating parties. Many times, EPA finds one or a handful of PRPs and then ceases to identify other responsible parties leaving the cooperating PRP to search out and bring costly legal action against the recalcitrant parties. Other times, the agency will "pull the rug out" from under cooperating PRPs by settling and providing contribution protection and covenants not to sue to others. Both of these actions by the agency result in additional transaction costs going to lawyers and consultants and not to cleanups.
- Access to orphan share funding is not consistently applied. Most of the time, on "mixed funding" sites, EPA will only pay the orphan share of the site costs up to the level of its in-kind contribution. This was not what Congress intended and this should be rectified.

Missed Opportunities

It is important to point out topics discussed by the Subcommittee where its deliberations did not result in meaningful recommendations. I will refer to those areas as "missed opportunities".

Program Administration

- (1) Remedy Selection:
 - Cleanup decisions should be made on the projected future use of the property.
 - PRPs are forced to pursue outdated Records of Decision (RODs) and spend millions of dollars on remediation systems that will never adequately address the contamination problem.
- (2) Early Involvement of PRPs:
 - EPA should revise its PRP search guidance to ensure that responsible parties are brought to the table earlier in the process. This will provide efficiencies to the program and reduce overall transaction costs.
- (3) Consistency Among Regions:
 - Sharing of Superfund experiences between regions is spotty at best. For example, EPA regions differ in their support to cooperating PRPs in negotiating access to sites and enforcing access agreements.
- (4) Headquarters review for NPL sites:
 - The Assistant Administrator is the national program manager for Superfund. As such, it is appropriate that a final policy review be made at the headquarters level. I believe that this practice should continue.

Program Funding

- (1) Increase funding for orphan shares and for actual cleanups. This could be funded in part through reductions in program administrative costs.
- (2) As the Superfund program declines, a review of staffing levels should be conducted.
- (3) Reimbursement of PRPs for orphan share expenditures will result in increased willingness of PRPs to come to the table.

- (4) Reform of rigid contract administration procedures and outmoded contract vehicles will result in increased efficiencies and substantial savings to the program.

In conclusion, I am grateful for having had the opportunity to participate in this process and wish the EPA success in implementing the recommendations.

Position Statement of: **Dolores Herrera**
Senior Advisor, Alianza Ambiental Center
Environmental Justice

Thank you to the Taxpayers, EPA, OSWER, Meridien & Ross, and Staff's for your support of this project. I respectfully acknowledge my colleague's contributions and thank them for their hard work.

PREFACE: When asked to volunteer my time, expertise and service to work with other senior level managers to advise EPA on specific issues within the Superfund Program I realized that issues and problems would arise. As a longtime grassroots community activist and public servant I live in a neighborhood with two superfund sites. It is within that capacity, and as director of programs and the community TAG representative that I have come to have a high regard and respect for EPA Region 6 and their role in partnership with the community. I debated on signing on to the report that my colleagues and staff labored over during the last 22. I signed because I had no set, definitive expectations. I have been around long enough to know that when you get a group of highly diverse people together (like ours) to discuss monumental issues (like EPA's) to make recommendations on environmental policy and agency direction that it becomes a struggle to create a product. One of the community's right of passage is to sit at the table interfacing with policy makers, industry, environmental groups, academia, government and other stakeholders to tell the people's real story. I do not want to offend my colleagues, EPA, any organization or group with my position, but just as hard as they fight for their constituency so shall I. It is a mistake for EPA to decide to create public policy from the total subcommittee report – any policy must be based upon the Consensus Recommendations only, not on the collected Range of Views. Our colleagues representing industry cannot be faulted inasmuch as they are working hard to protect their bottom line, net profits. Community members do the same thing, we are on the front lines among the environmental degradation, protecting the lives, health, social and economic welfare of real people. We have it tough lacking the power and resources to make a strong argument for human life. The case must also be made for the States who carry a tremendous burden and responsibility, without sufficient resources to be as effective as they could be. We are grateful for humanitarian efforts and contributions by environmental groups. On the other hand, some communities are still shuddering from experiences with paid researchers, scientists and academia coming into our neighborhoods armed with prestigious credentials, grant money, and staff to take advantage of people and the situation. Some outsiders create a livelihood on the backs of the people. In the interim, we continue to be disempowered and workplaces continue to be poisoned. The committee did not reach consensus. An old Spanish dicho says: *"The only way someone will move is when the fire begins burning on his or her backs."* Maybe that is when people will get serious and join together, when America is on fire? Almost twenty-five years ago on June 13, 1979, the EPA issued a press release that proposed a federal trust fund to clean up the most contaminated, hazardous waste site in our country. It was a day of promise and hope for people who had bore the ill health effects of living near the toxics and poisons and accountability for those who had created the problems. The press release said, *"President Carter (today) proposed legislation to Congress to establish a multi-million dollar fund to help clean up hazardous waste dump sites which threaten public health or the environment. The fund, comprised of federal money and fees on the oil and chemical industry, would be part of a total governmental response to spills of oil and hazardous substances and problems related to inactive and abandoned hazardous waste disposal sites."* The superfund tax expired in 1995. The people lost another round as the proactive activity and commotion to promote reauthorization was not successful enough to revive it. On March 11, 2004 when the US Senate voted 44 to 52 to defeat reinstating the tax. New Mexico Senator Jeff Bingaman voted for his constituency, voting for reinstating the tax. We continue to go, round and round while people, children are sick, some have died or are dying from exposures and illnesses directly linked to the pollution and contamination at the sites. The hills, mountains, rivers, valleys, oceans, forest, plants, animals and the entire ecological balance are diminishing at an alarming rate. Yet, when we are at the table we continue to expend tax dollars to argue and hide instead of striving to do what is right. I wonder what would happen if we put our babies' faces on the contamination and not just dollar signs? **ENVIRONMENTAL JUSTICE:** The majority of the toxic dumps are situated among people of color, minority, tribal, and poor disenfranchised populations. Human, civil and constitutional rights of people of color, minorities, tribal and the poor have been devalued by unfair, unjust practices in the location and placement of toxic cesspools. The minority and poor communities posed the path of least resistance. The community's rights to fairness, equality, equity and justice

ended in EJ communities when the profit margins of commerce and industry became more valuable than decency and human life. It is morally and ethically wrong to sacrifice a people, a culture – racism in its lowest degree. EPA must strengthen and reinforce the laws and mandates that protect people and the environment. The White House Executive Order 12898 on Environmental Justice directed federal departments to protect and prevent and enforce EJ. EPA should support further expansion of collaboration with local superfund communities. Partner with environmental groups; provide funding for innovative onsite programs and other community led EJ projects. Superfund policy and Agency direction should address working with local stakeholders and practice the Principles of Environmental Justice. **PUBLIC INVOLVEMENT:** Additional resources should be provided to the local, grassroots community stakeholders. EPA should increase funding and technical support to communities at optimum levels. Superfund communities should be supported to develop common sense approaches on technical dialogue, educational outreach and information toward meaningful public participation. EPA should streamline the process with greater access to public information. They should be responsive toward the local community working with them in developing acceptable procedures toward communication, public outreach, information, education and policymaking as it affects the community and site. EPA should provide accounting practices and measures to create and revise internal management decision-making to competently engage the affected stakeholders, communities, rural, urban, tribes/tribal governments. EPA should place special emphasis to honor and preserve the unique history, values, customs, religious ceremony, traditions and values of the impacted community. **ATSDR & NIEHS:** Many of my colleagues around the country have been and are very upset with treatment by ATSDR and NIEHS. Both agencies that were created to support superfund communities have not always been effective or accountable to the primary stakeholders and representative stakeholder advisors. This must improve. These programs as well as other projects and initiatives at all levels of government should explore standard options for the local superfund communities to share an equal partnership to collaborate in the grant making process. All should be non-discriminatory of federal programs. EPA should establish a requirement to work in full partnership with the superfund TAG directly, to provide acceptable, appropriate services and practices to best serve the needs and requirements of the affected community and not the other way around. An honest assessment engaging the local, existing talent pool and expertise should take precedent that accompany provisions of funding and resources to employ local, grassroots, experts in the superfund communities. A collection of performances should be reinforced using such tools as a Community Survey and Performance Profile, detailed in an unbiased, transparent Community Report Card. This requirement would be a measurement of reliable information: current, applicable data directly related to human, public health and the environment at the superfund sites to provide notification and accountability. **HUMAN AND PUBLIC HEALTH:** EPA, other agencies and collaborators must work with the community. They should not bring in strangers, experts to implement a plan that doesn't work, which insults the community and wastes our (too few) precious resources. Agencies must respectfully listen to the people and pay them for their expertise. Incidences of serious health problems and risk occur to a greater degree in people of color, minority, poor communities, tribal, industrial, and farm workers, and at a higher, faster rate than affluent, white populations. Present dangers to human health and future risk are a reality and are pre existing conditions that should be the primary factor in the ranking of sites. Ecological impacts should also be considered. Superfund communities often go berserk when they hear that additional health studies or environmental research is being proposed. For too long, and too often the government and their representatives have not respected the rights have and have not listened effectively to the people. Many of the data collections provide inconclusive information, which only bemoans distraction with little or no relief to the community. Just constant employment opportunities for “experts.” Resources must be connected to clean-up actions and direct health services modeled with the local grassroots community to serve pertinent, existing (future) health problems at the superfund site. Improving data collection and timely delivery to superfund communities continues to be problematic. EPA should provide resources within the TAG process so that the affected superfund stakeholders, communities build consensus to improve upon the strategy, orientation and delivery. All actions should be done protective of human health and the environment. **SUPERFUND TAX:** The tax must be reinstated. Many communities lack the necessary resources and access to public information and process that is reinforced due to poor health that is directly affected by toxics, contamination and pollution, stress, lack of resources, education, disenfranchisement and other mitigating factors living with superfund. There is public acknowledgement of EPA's problems, fiscal, program management and waste of resources, but it is unfair to penalize impacted neighborhoods, communities and tribes. The government should reinforce and strengthen venues for partnerships to restore and reinstate the polluter pays principle. **PROCESS:** The subcommittee did not achieve consensus on several important issues

due to consequences related to committee structure, process and direction. Lacking the environment of trust, open dialogue with built in measures for accountability consensus was not achieved. When the preliminary and interim rules were abruptly halted and others were inserted in the final stages of the development of the Report the necessity for building consensus became improbable and a moot point. Throughout the process, issues and concerns were communicated. The facilitation team was amenable to listen, but lacked the proper support to solve the problems. The inevitable pressing time lines, volatile subject material, the potential for discord and the plan for solutions among the diversity and high-level expertise of participants was not addressed or presented until the last weeks of the process. When the rules were changed, the undercurrent of agendas, communication problems and lack of transparency manifested into grave trust issues leading to an impasse undermining acceptable results. **LEADERSHIP AND FACILITATION:** The lack of building “community” among our colleagues and the structure further impacted producing a consensus document. The membership highly qualified was generally focused, but at times individual agenda’s were mired by lack of transparency impairing enough honest, fruitful discussions to provide holistic decisions. As polarization and dissent of the committee occurred some perceived it as being counter productive and offensive, therefore, the debates that would have provided the substance needed to build consensus never materialized. The organization and development of the subcommittee was a challenge, but the facilitation team did their best in a tough situation. I am doubtful that their expertise was fully utilized. EPA provided a lot of responsibility to the Chair with a key element of relationship building missed. Oftentimes, the Chair and facilitation team worked among themselves in major planning, and development of content and structure, which created an imbalance of power affecting interactions and interpersonal relationships that displaced the committee. It was frustrating when the documentation of the meetings proceedings did not capture the thrust and synopsis of our discussion. Another problem was that some members chose to communicate only to the hierarchy and not during our meetings or as participant in-group e-mails. The timeline and challenges of working with such a high level group of peers with diverse opinions and self-interests disallowed members access to all of the information in order to make honest assessments and decisions. I appreciated when the dialogue and deliberations were fluid and transparent and took on a life of their own. In order to effect systemic change the process of change must be transparent. Unfortunately, much of the relevant dialogue was never captured and debated to transpire to consensus. This process left huge gaps – a “non-consensus” report with various views with limited or no attribution. My greatest fear and anxiety is that the agency and the public will not be able to discern the difference between the Consensus and the Broad Range of Views in the Report; they are not interchangeable. The Broad Range of Views should not be used to force EPA to create policy that weakens the program or standards, which would become disastrous to human health and the environment. **CONCLUSION:** The care and protection of our generation is no more important than the care and protection of future generations. The present generation has an obligation to solve these problems and not pass them on to future generations. The ill health effects, environmental, social, economic issues and stigma of living in contaminated, polluted communities are real; obscured in political surroundings, which create social and economic nightmares for citizens, government and elected officials. Real people, minority, poor, disenfranchised populations continue to bare the brunt of the nightmare created by years of abuse to people, the earth and natural resources. Many in EPA work hard to protect human life and the environment. Sufficient resources should be secured for communities and tribes to be financially and technically empowered to fully participate in the decision making process to make educated choices that affect their families, communities and themselves. There are inefficiencies in government and at EPA, but that does not alter the fact that additional money is needed for the superfund program to be functional to clean up all the sites. Therefore, I advocate for additional resources for EPA; supporting a short-term funding increases of \$300 to \$800 million in order to protect communities at sites that have been delayed because of insufficient funding. A word of caution regarding Mega Sites, they are not Brownfields, a rose garden, or a ball field. They are mega toxic dumps; clean them up – properly. Industry created the problems; it is unfair to ask the citizens of this country to pick up the tab for their actions as they reap the rewards and profits. It is an outrage to expect the already polluted, contaminated superfund communities to pay and risk double indemnity for this crime and environmental injustice. Where’s the America where people used to own up and accept responsibility for their actions? Industry must be held 100% accountable for the restoration and clean up all of their messes.

I agreed to sign onto the 2004 NACEPT Report with comments and reservations. I provide my endorsements to the: 1.) “TOP TEN THINGS THAT WOULD MAKE SUPERFUND MORE EFFECTIVE” presented in Jason White’s comments; and the 2.) “Appended Comments” of: Doris Cellarius, Grant Cope, Aimee Houghton, Ken Jock, Vicky Peters and Lexi Shultz

Position Statement of: **Aimee Houghton**
Associate Director
Center for Public Environmental Oversight

For numerous reasons that I will articulate below I was not able to sign on to this report. Personally, this was a difficult decision because I have long been committed to the process of consensus and I strongly believe in seeing through what I have begun. However, those two factors, by themselves, do not provide enough of a reason to endorse, in full, a document that causes me great concern.

In dissenting I wish to express my support for my Subcommittee colleagues who worked so hard and so diligently for the protection of human health and the environment—particularly representatives of the tribal and environmental justice communities. From experience I know of the sacrifices these members must make in order to participate in national policy dialogues and their knowledge, expertise, and commitment are invaluable. I would also like to make clear that I concur with the consensus recommendations and would like to see them implemented. Finally, I wish to fully and formally endorse the comments of Jason White, which include “Top 10 Issues To Protect Public Health and the Environment at Superfund Sites”, as well as the appended comments of Dolores Herrera, Doris Cellarius, Alexandra Shultz, Vicky Peters, Ken Jock, and Grant Cope.

In closing, I would like to express my thanks to EPA and all those who took the time to share their knowledge and expertise with the committee.

The Hindrance of Process

Our initial charge (see Appendices, A-7) was to put forward consensus recommendations to address serious issues surrounding the future of the Superfund program. Having served on two previous consensus policy dialogues, I had some experience with the process and more than an inkling as to what to expect when a large and diverse group of people come together in one room, around one table, to discuss issues where they are bound to disagree. This group was no different.

What was different was the changing structure of the group and the timetable. In my experience, a consensus dialogue is best served when all members understand how report recommendations will be achieved and characterized and what type of attribution will take place. With this type of foundation in place, the facilitation team can move the process in a way designed to gain a common understanding of the issues, build trust among individuals and often strangers, begin to develop recommendations, start some sort of negotiation process and finally begin the process of compromising which is essential to achieve consensus.

Time is also immensely important. Committee members must have enough time to be briefed on a range of topics relevant to the discussions, break the topics up and meet in smaller groups, work through controversial issues as a large group and finally begin to craft recommendations. Once the crafting begins, the real consensus process begins. Even with a draft document in the final stages it is not unusual for members to deliberate over the fine points for months. Ultimately, it is that deliberation that produces a quality document whose recommendations live and breathe and whose legacy is beneficial to the public and impacted stakeholders long into the future.

I am sorry to say that is not the process that I have been engaged in for the last 20 months. While I have the highest regard for all of my colleagues who served on this committee, we were all badly served by a process that boxed us in and did not allow us to develop a document of significance. Initially, EPA gave the Subcommittee 18 months to finish our work. With a charge as enormous as ours we were bound for failure from the start. Based upon prior experience it often takes over a year before a first draft of the report appears. Our Subcommittee also went a year before producing a first draft. Unfortunately that first draft was produced well before we had agreed—even conceptually—on what we wanted to do or say. As a result, we focused on language before engaging in creative problem solving of the issues.

Quite a few Subcommittee members warned that we were not ready to produce a draft but, given the time constraints, the Chair insisted that we didn’t have much of a choice.

Typically, when that draft finally does appear it gives members something to react to and the process begins its next evolution—determining the priorities of the members. Up until that point most members have been simply “having a dialogue.” Once the ideas are put on paper, dynamics get to be a bit more “real”. As more drafts develop, finer points of the debate are brought to light and often times the whole structure of the report will shift once people see their words in print. Again, this group was no different. A little over a year after our first meeting, we had a first draft, yet we were ending in six months. The timeframe was impossible. With that in mind the Chair pushed us to resolve differences and develop recommendations.

Resolving differences was not the problem. Resolving differences under immense pressure where trust was not fully developed became the problem. In September 2004 Ms. Horinko addressed the Subcommittee and told us that if we could not reach consensus EPA would still like to hear the discussions we had on those particular topics. I believe at this moment we began to veer away from consensus. At the following meeting in early November, an EPA staff member informed the Subcommittee that if we did end up with a report that contained some consensus recommendations and a range of views on topics where the Subcommittee could not agree, then EPA would look at those range of views and take those into consideration as well when developing policy.

At this moment any incentive for consensus, on difficult topics, was effectively eliminated—why compromise when all views will be equally considered. The Subcommittee now engaged in a “range of views” process. The range of views had to be somehow characterized and we ultimately ended up with a “some people/some people” approach. Such an approach is bound to misrepresent the nature of the discussions and confuse the positions of Subcommittee members

Our facilitators, the Meridian Institute, were then stuck with the challenge of trying to represent a range of views and, not surprisingly, the starkest views are often what appear in the text while the nuances get lost. EPA doesn’t need to know polarized views. They are well aware of those positions. What they do need to know is how to bring those different views together. The views that might have reflected some movement in either direction are, for the most part, absent from this report. Thus, the report doesn’t ultimately do justice to the complexity of the discussions and views. Consensus seeks to avoid this dilemma by striking middle ground. Consensus also demands that everyone own the entire product, and that the manner in which consensus is achieved is apparent (or transparent) to all.

Ultimately, ideas that may have had the support of 30 members could end up being vetoed by just one person, and ultimately represented with equal validity as an opinion voiced by one. Readers won’t be able to discern that and, in some instances, neither will Subcommittee members. The some people/some people characterization, far from demanding everyone to own the entire product, gives people a vehicle to hide behind.

As an example, I believe the funding discussion in the Report erroneously emphasizes the disagreement about the source of funding. In reality, while some of us argued for reinstatement of the fees, we were all willing to forego such a recommendation if we could get a temporary increase, in a reasonable amount (as articulated in three separate reports by the IG, GAO and Resources for the Future) to address backlog sites. Sufficient, interim funding is critical to help communities at sites that have been delayed because of insufficient funds—such as New Bedford Harbor. It was the placement of restrictions on the use of the extra funding that caused the breakdown in negotiations, not the reinstatement of the fees. To state otherwise completely misrepresents not only my position but also, what actually transpired. (Please see Grant Cope’s appended comments for further details.)

Transparency of Dialogue

At least three of the consensus recommendations deal with the subject of transparency - both in EPA’s decision-making process and publicly available data on the Superfund program. These are all recommendations I fully support. However, in many instances the Subcommittee was unable to put into practice what it recommends to EPA. Due to the evolving “range of views” format the nature of consensus recommendations kept changing. Members would leave a meeting believing they had consensus on a recommendation only to find out later that members had not agreed, but had not spoken up. Often members were in the dark as to where other members stood on certain issues making it difficult to understand all sides and work toward an acceptable compromise. In

short, I believe we did not have an open and transparent dialogue process. Indeed, in reviewing the final report I was often times at a loss as to whose views were being represented by which text. This is something I have never before experienced in a FACA dialogue process.

As an example, in the March 5, 2004 preview draft of the final report the following language was included in Recommendation 1: ***Anticipated cleanup costs and the amount of funds available in the Superfund Program budget should not be criteria used to include or exclude sites from the NPL.***

To my knowledge this recommendation had full consensus as it had appeared in at least two prior drafts. In the final version of the report that sentence is no longer included in the recommendation. Why is it gone and who objected to it? I would imagine that most members, like myself, have no answer for either question.

Technical Assistance Grants (TAGS)

Another recommendation that did not make it into this report but which I feel is crucial to communities impacted by Superfund or Superfund candidate sites is one on technical assistance. In order for communities to be fully engaged in the cleanup process they often need the resources a Technical Assistance Grant can provide. The Subcommittee was working toward a recommendation that would have provided grants to community groups at NPL-eligible sites. Current EPA guidance already allows grants to be awarded for sites that are proposed for listing. This type of assistance would only be made available if TAG funding exceeded the requests generated by community groups at listed sites. Other members on the committee—again, I'm not certain who—did not support this recommendation.

Position Statement of: **Ken Jock**
Director, Environment Division
St. Regis Mohawk Tribe

In addition to the "Top 10 Issues To Protect the Public Health and The Environment at Superfund Sites," the statements below reflect positions on important issues addressed in the Report. I also endorse the comments of Jason White, Dolores Herrera, Lexi Shultz, Aimee Houghton, Vicky Peters, and Grant Cope.

Reporting : Accurate and transparent reporting of site and program progress, anticipated program costs, listing decisions, and site conditions at NFRP'd sites, is critical for evaluating program success, and preventing unacceptable risks.

Increased Management of Mega and Pre-SARA Sites: The costs of these sites in money, lost community values and, for the latter, damaged program credibility justify heightened attention, and creative management to accelerate and improve decision-making at these sites.

Federal facilities: The Federal facility cleanup program dwarfs the NPL both in risks posed and costs of cleanup. Tribes have been particularly impacted by these facilities. The progress of cleanup is also significantly less. Unique Problems related to these facilities warrant a focused dialogue on issues arising since 1996.

Protection of the Environment: The protection of human health is not more important than the protection of the environment. We are just a small part of the environment, and the law requires both.

Protection of Future Generations: The protection of our generation is no more important than the protection of future generations. We have an obligation to solve our own problems and not leave them for others. The Haudenosaunee teachings tell us to consider the environmental effects our decisions will have on the next seven generations.

Also endorsed by:

Vicky Peters
Doris Cellarius
Aimee Houghton
Jason White
Dolores Herrera

Niawen/Thank you,

Position Statement of: **Mayor Frederick M. Kalisz, Jr.**
City of New Bedford, MA

Serving on the NACEPT for the last twenty months has been a great honor and an excellent educational experience for me. The strength of any subcommittee is the quality of the members and of the leadership. In this case, both were outstanding. I do not know how EPA could have brought together a more informed, a more hard working, a more diverse, a more articulate, or a more passionately committed group of people to wrestle with the problems of Superfund, than the subcommittee it assembled. Every member brought to the meetings a wealth of experience dealing with the real problems of identifying and cleaning up hazardous waste sites.

This was not an academic group. Even the academicians among us came to the group with pressing concerns about their own communities. My own City of New Bedford, MA has been living with a massive Superfund site in the middle of our Harbor, the economic and in many ways cultural center of our community, for more than 20 years. And unless funding is increased we are looking at another 25 years before the Harbor is made safe for our residents. Of course I brought my concerns to the NACEPT. To do otherwise would have been irresponsible. In fact, as the only elected municipal official on the subcommittee, I did my best to represent the concerns of other cities whose residents are affected every day by the presence of a Superfund in their neighborhood.

My fellow members likewise came to the task at hand with overriding responsibilities. Industrial representatives, environmental advocates, tribal spokespersons, community leaders, insurance company representatives, state regulators, attorneys – all of them brought deeply held convictions, based on their own experiences to the deliberations of the subcommittee. Diversity of views, experience, and interests was a great strength of the subcommittee.

Because of the group's real world orientation, agreements did not come easily. Everyone was acutely aware of the stakes, and of their own responsibility to address the issues that confront them on a day-to-day basis.

The divisions on the subcommittee reflect the divisions in the country. But with a major difference. The subcommittee members engaged each other and engaged with the real issues about the future of the Superfund program with a sort of thoroughness and factual foundation that has been mostly missing from the national debate. Readers of the report may not find a comprehensive set of recommendations, a fact which many of my fellow members and I regret. But they will find a suite of recommendations aimed at improving the efficiency of the program. They'll also find a full statement of the key issues and points of view, and along with an accurate, factual statement of present conditions.

The subcommittee report, in my view, provides a foundation for national decision-making.

And no decision is more vital than how to finance the program during the next five to ten years. The subcommittee spent many hours on this topic. While improvements in programmatic efficiency may reduce the strain on EPA resources, they won't solve the entire problem. For this reason, I remain steadfast in my belief that the issue of increased funding for Superfund must be considered. Some have criticized us for going beyond the charge. In my opinion, confronting the funding question head-on was an unavoidable responsibility. The Superfund program, as its name suggests, is at heart a program for financing the cleanup of abandoned sites. In recent years, the belief has emerged that the job of cleanup is mostly over, that the program has achieved its major goals and that the right approach for the future is to slowly phase it out. The subcommittee report and the factual materials provided by EPA demonstrate that nothing could be further from the truth. In fact, the need for a well-funded program has never been greater. Years of study, investigation and design have produced a set of ready-to-go cleanup projects that now languish for lack of resources. The fundamental question, in my view, is whether to take on this challenge today, or to pass it off to the next generation, when the costs of action and the consequences of past inaction will both be much greater. The issue could not be clearer. Now it is for Congress and the Administration to settle it.

In closing I wish again to thank my fellow subcommittee members, Chairman Raymond Loehr and Assistant Administrator Marianne Horinko for the opportunity to participate in this important effort.

Position Statement of: State Superfund Managers – Joint Member Comments

Gary King

Illinois Environmental Protection Agency

Ed Putnam

New Jersey Department of Environmental Protection

Catherine Sharp

Oklahoma Department of Environmental Quality

In past discussions relative to the federal Superfund program, the role of State environmental protection agencies has frequently been downplayed, without an understanding of the critical role States play across Superfund and all contaminant cleanup programs. We, as State Superfund managers and members of the NACEPT Superfund Subcommittee, appreciate the thoughtful consideration that was given to our views by the other members of the Subcommittee throughout the discussions. We appreciate that the final report includes an important consensus recommendation (Recommendation 8) advocating a continued investment in capacity building for State cleanup programs. Given the array of individual state capacities, and the challenges faced by state programs (e.g., declining state budgets), and the diminishing resources at the national level, the Subcommittee's Final Report urges EPA to continue its efforts to build the capacity of state remediation programs.

As the Final Report recognizes, building capacity within State programs is essential to maintaining a strong national Superfund program. State cleanup programs are an important piece of the cleanup puzzle. They serve as a complement to the national Superfund Program by providing for the cleanup of many sites that are not eligible for the NPL and, in some cases, by providing administrative mechanisms to oversee cleanups at sites that would be eligible for the NPL. Collectively, state programs have addressed many thousands of contaminated sites – including some NPL-eligible sites – and they will continue to do so.

On the other hand, we are disappointed that at the 11th hour consensus within the Subcommittee, which had held for many months, disappeared with regard to the role of costs in listing sites on the NPL. We strongly advocated the inclusion in Recommendation 1 of the following sentence:

“Anticipated cleanup costs and the amount of funds available in the Superfund Program budget should not be criteria used to include or exclude sites from the NPL”.

This sentence does not appear in the Final Report. While we acknowledge that EPA decision makers may have an awareness of costs and knowledge of likely program funding, we believe that this knowledge should not be used to limit or expand the number or types of sites listed on the NPL. We believe that the NPL should represent true national priorities—sites that meet the eligibility criteria and are judged to need the expertise and resources that only the Superfund Program can provide.

EPA should place sites on the NPL based solely on consideration of a set of consistent factors. Anticipated cleanup costs and the amount of money in the Superfund Program budget should not be criteria used to include or exclude sites from the NPL.

In 2002, EPA instituted a new national-level process in which officials from the regional offices and headquarters evaluate all NPL-candidate sites, group them in tiers based largely on the relative significance and urgency of risk but also taking into consideration other program management factors, including budgetary constraints, and then make recommendations about which NPL candidate sites should be proposed for NPL listing. Prior to this change, in general, EPA headquarters provided guidance and oversight to the regions on national listing policy and ensured that listing packages were appropriate and legally defensible. Most NPL-candidate sites recommended by regional offices were proposed for listing on the NPL, provided national policy was followed and the HRS score was valid. Since the advent of this new national-level review process, approximately half of the NPL-candidate sites sent forward by regional offices to headquarters have been proposed for NPL listing. The remaining NPL candidates sent forward by

the regions have been held over for reconsideration in future listing cycles thus delaying the remediation process indefinitely.

While the Subcommittee had a range of opinions about this national-level review process, it did agree that the national-level review process (if it is continued) should focus on:

- bringing national consistency and a national perspective and judgment to bear on NPL listing proposals,
- monitoring regional offices' implementation of Program guidance,
- considering geographic fairness in NPL listings so that one region of the country does not inappropriately dominate the NPL, and
- ensuring that HRS packages are legally defensible and of high quality.

The Final Report recognizes, as did the Subcommittee, the ongoing and critical nature of State cleanup programs in supporting and implementing the federal Superfund program and providing alternative cleanup resources to address non-NPL sites. Although States are critical to the successful implementation of environmental remediation programs, we, as State Superfund managers, recognize that States cannot fund remedial actions at NPL fund lead sites. It is vital to the health of our citizens and the protection of our environmental resources for the federal government to adequately fund the federal Superfund program. This position is not only supported by the three States represented by Superfund Managers on the NACEPT Subcommittee, but by virtually all States with active Superfund cleanup programs. Some states, like New Jersey, strongly advocate reinstatement of the expired Superfund tax to assure the adequate funding of the federal Superfund program.

We, as State Superfund managers, do not believe that the current funding level for remedial actions at NPL Fund lead sites is adequate. In our view the deficiencies in funding are creating a stranglehold on EPA's ability to move cleanups forward at these sites. We remain very disappointed that the Subcommittee was unable to put aside its differences and reach consensus on a recommendation for additional funding.

Position Statement of: **Edward C. Lorenz**

Reid-Knox Professor of History and Political Science–
Alma College
Pine River Superfund Task Force Member

I find the report reflects well those recommendations about which there was universal agreement and which specifically respond to the charge given to the subcommittee. Also, the report accurately discusses a range of other topics about which members became aware and which supplement the core recommendations. I would include here especially those relating to ATSDR, NIEHS, and long-term stewardship in Chapter VI. The major weakness of the report is the failure to find agreement on issues related to financing Superfund. The later drafts of the report, I believe, addressed well the thoughts of most members of the subcommittee on a package of financial recommendations, essential to return the program to dedicated funding wisely spent.

As a resident of a small community with one mega-site and two related Superfund sites, I find it unfortunate not to make recommendations related to financial management and needed interim levels of funding, especially given the inclusion in the program's name the word *fund*. The subcommittee seemed very close to consensus on such issues, but the spirit of compromise seemed poisoned by maneuvering for ideological, interest group, and political advantage. Such maneuvering reflects one of the worst features of current American policy-making, the endless struggle for staging the symbolic fight rather than a desire to practice both restraint in rhetoric and prudence in policy to produce meaningful progress.

The search for short run ideological or political benefit frustrated any effort to assess well the past and current obligation to raise funds responsibly and spend them with care and maximum impact. This failure is of special concern to residents of communities such as mine who have seen recent generations profit from behaviors that leave resources depleted and contaminated without regard to the impact on our descendants. The failure to fully address funding in this report, as happens in so many of our political forums, reflects this generation's tendency to ignore both its stewardship responsibilities and our need to pay the price for our mistakes and those of our parents. Without in any way favoring one mechanism over another, I regret that such a talented and diverse subcommittee could not agree on some means to halt deficit funding of Superfund. As both a parent and grandparent, as well as a professor of history, I know current financing of the program irresponsibly transfers the cost of cleaning our generation's mess to the accounts of our descendants.

Perhaps it is too much to expect that the members of the subcommittee could overcome the habits of our generation to avoid responsibility. The habits are ingrained in our culture and unable to be defied by a small group. Even the charge to the subcommittee avoided consideration of funding increases, despite the clear evidence, described well in Chapter II, that a gap is growing between costs and funds available to on-the-ground clean-ups. Whatever the explanation or excuse for not recommending some solution to the funding needs of the program, the failure to formally recommend both adequate funding levels and mechanisms that would improve controls of spending is a fundamental flaw of our report.

Despite such regret, I can say that both St. Louis, Michigan, and Alma College have been honored that one from among us has been invited to participate on the subcommittee with a group of people who, as our chair has said so well, "fulfilled their charge extremely well and have done so professionally and positively." Likewise, it has been a pleasure to work during the last two years with many dedicated EPA employees and our facilitators who did so much to bring our deliberations to a fruitful conclusion. Finally, our chair has played a model role in leading us through our deliberations. I hope the many recommendations on which we have come to agreement outweigh the loss inherent in what we have elected to omit.

Position Statement of: **Tom Newlon**
Attorney, Stael Rives

I would like to start out by thanking my fellow Subcommittee members, EPA staff and the facilitation team for their very substantial efforts. I grew to deeply appreciate your professionalism, dedication and hard work in the face of what proved to be an extremely daunting task. Thank you for allowing me to participate.

My personal efforts on the Subcommittee focused on megasite issues, specifically the following: (1) addressing the current backlog of fund-lead megasites that either are or will soon be ready for remedial action implementation; (2) identifying factors that lead to potentially-unnecessary increases in costs and timelines, turning currently-listed sites that would not necessarily need to be megasites into extremely expensive and difficult endeavors that cross the somewhat arbitrary megasite cost threshold; and (3) recommending approaches to potential new sites that could lead to more cost-efficient and efficacious cleanup, thereby avoiding the creation of new megasites.

The megasites subgroup that I worked with over the course of the first year or so of Subcommittee deliberations (which included representatives of all interests on the Subcommittee) received a great deal of highly informative input from EPA and others, worked collaboratively in a non-politicized environment, and eventually came up with what nearly all of us viewed as an important and well-balanced set of recommendations to address a variety of megasite-related issues. Although our efforts were well received by the vast majority of Subcommittee members, the Subcommittee's ground rules requiring absolute consensus resulted in nearly all of our recommendations falling victim to members who felt strongly that the reforms we were recommending might somehow weaken elements of the program that they held dear. As a result, the final Subcommittee report contains precious few of our subgroup recommendations, and the explanatory text has been watered down from a hearty stew to the consistency of chicken broth.^D In my three pages I will attempt to reconstruct some of the thinking that went into the megasite recommendations that were eliminated in the last weeks of nearly two years of effort.

(1) Addressing the current backlog. As a maturing program, a significant number of sites have now reached the stage in the process where major expenditures on remedial action implementation are necessary. We saw firsthand the situation in New Bedford, and learned that just a handful of fund-lead sites, if addressed in the most cost-effective, expeditious fashion (i.e., quickly), would use up EPA's entire remedial action budget for a number of years. This would be an untenable situation, of course, as it would shut down all other EPA-lead sites, be they ready for remedial action or at some earlier stage. So how do we get more funds applied to sites like New Bedford Harbor? The easy answer is to recommend more funding for the agency. However, actual funding for on-the-ground (or in the water) remediation efforts is such a relatively small percentage of the overall program budget that increased funding alone would not guarantee that the backlog of sites would be effectively reduced.^E So exploring possible changes in the way EPA does its Superfund business seemed appropriate, rather than simply recommending that we throw more money at the problem and hope for the best. The funding recommendation debate is summarized in the report and very well documented in the record of the Subcommittee's deliberations, but as a megasite issue, funding is only part of the equation. How the money is spent is also key, and linking additional funding to an outside review of the program's approach and expenditures seemed a sensible approach.^F

A more fundamental change than an audit, however, would be a change in how EPA actually carries out the work at fund-lead sites where there are no viable PRPs remaining. Megasites of

^D See "Talking Dust Bowl Blues," Woody Guthrie ("Mighty thin stew, though, you could read a magazine right through it.")

^E See Comments of Mel Skaggs and Lindene Patton for more detail on EPA budget issues.

^F See Lindene Patton comments for more detail on audit rationale and a discussion of contracting and other reforms that hold great promise for improving the cost-effectiveness of cleanup implementation.

this type have a very poor record of extremely lengthy timelines and extraordinary expenditures. An alternative approach would be to make use of creative contracting mechanisms and direct appropriations for the limited number of sites that currently hamstringing the agency's overall program. For example, the cleanup needed at New Bedford has been identified in a ROD and designed. The only thing standing in the way of completion within three years is adequate funding. EPA's current approach, however, would drag this cleanup out over 15 or more years. Anyone familiar with major project construction knows that massive cost overruns and inefficiencies are likely to accompany such an attenuated timeline. As an alternative approach, why not put the cleanup out to bid so that private entities (backed by the appropriate insurance or other financial instruments) could take on that cleanup obligation and move it forward expeditiously to completion. A one-off appropriation from Congress for this effort would bring new cleanup money directly to implementation of a major remedial action, without the funds being watered down in the welter of other obligations that seem to bleed off Superfund appropriations before they can be applied to on-the-ground cleanup. Those in Congress who are normally opposed to additional funding for Superfund due to (in their view) its nearly-legendary inefficiencies and inequities would be attracted to an alternative approach that bypasses much of the current remedial action implementation process, giving funding a much better chance of success. Since the final cleanup measures have already been decided on and designed, EPA and Congress would not be delegating risk decisions to a private party, but rather would be tapping into a more efficient way to get the identified work done. Creative contracting and financing of this type must be explored if the agency is to quickly work through the backlog of sites that are ready to go. Communities deserve no less, and EPA and Congress should be willing to go outside the box, at least on a pilot basis, to remedy this backlog.

(2) Identifying factors that turn sites that need not be megasites into megasites. Discussions around these issues were difficult due to a lack of common experiences and understanding among the Subcommittee members. As Empedocles wrote in the 5th century B.C., "Each man believes only his experience." The experiences, or at least beliefs, represented on the Subcommittee were widely divergent on the subject of whether there are megasites currently being addressed by the program that could have been handled differently so as not to become megasites, while still maintaining an appropriate level of protection to human health and the environment. Views regarding how best to define and address risk were expressed in the Subcommittee as a whole, but the final report reflects little on the tie between approaches to risk and the creation of megasites. Clearly, if the agency is serious about discovering whether current megasites really needed to be so expensive, a fresh and objective review of how risk is defined and addressed in the program is necessary, with such a review most appropriately being carried out by experts from outside of EPA.^G Additionally, a review of how the program makes use of its resources at EPA-lead sites would be a good approach, this being a link to the audit recommendation that did not make it into the final report.

The megasites subgroup did identify a set of factors that, when present, seemed to correlate well with very expensive sites and lengthy timelines. These were sites that involve large geographic areas with a large number of PRPs, multiple contaminant sources, and widely dispersed contamination that tends to be concentrated in certain "hotspot" areas. Sites with these characteristics present a great deal of uncertainty about whether actionable risk is really present across the entire area (as opposed to the hotspots where the remediation need is likely clear) and huge transaction costs associated with decisionmaking, all of which combine to create extremely lengthy process timelines and very high process costs. In the experience of many on the Subcommittee, sites of this type would frequently be better addressed in smaller units, meaning that needed cleanup would be accomplished better, faster and cheaper, with no commensurate diminution in environmental protection.^H The megasites subgroup brought forward a recommendation on this topic which did not survive due to the objections of a small group on the Subcommittee that seemed bent on insisting that more money for business-as-usual at EPA was the only viable fix for the megasite problem.

^G See Comments of Richard Stewart and Jane Gardner on the need for an updated approach to risk characterization and prioritization in the Superfund program.

^H See Comments of Jim Derouin on addressing large areas of this type as composites of smaller areas that each may or may not require the attention of the federal Superfund program.

(3) New approaches that could help prevent unnecessary megasite problems in the future. The package of recommendations originally suggested to the Subcommittee from the megasites workgroup included the “small can be beautiful” recommendation described above, as well as recommendations on more frequent use of Enhanced Site Assessments and additional early (pre-listing) input from all interests, particularly at potential large-area megasites.^I The enhanced coordination recommendation survived, but lost a lot of its power to effectively streamline the program when the corollary recommendations from our subgroup were eliminated. Enhanced collaboration and coordination with the community, state, PRPs, Tribal governments and others gives EPA the opportunity to assess potential risks and take more of an iterative approach to certain types of sites. “Subdividing” is not a dirty word if it means that on-the-ground cleanup happens quicker and is more effective. Twenty-year process timelines with little or no cleanup may be useful for those of us who make their living representing parties who participate in that process, but any process that takes that long and is that arduous to get through is not serving the broader community well, either in terms of fiscal responsibility or protection of human health and the environment. Automatically listing large areas on the NPL, before exploring all possible alternatives to address specifically-identified risk drivers (i.e., sub-areas that are clearly hotspots that need remediation), is not a viable answer for the program over the long term. Enhanced site assessments involving additional data gathering and analysis should be employed for early identification of areas that can be addressed in a more focused, expedited way *prior* to simply listing an entire large geographic area and letting the chips fall where they may.

Despite the lack of absolute unanimity on the original subgroup recommendations on megasites, I urge EPA to review them carefully and to be bold in taking creative new approaches that give some promise of streamlining the process and getting to decisions in a more cost-effective and expeditious fashion.^J As many Subcommittee members discovered, being bold about recommending changes to the Superfund program has its considerable perils and frustrations, no matter how self-evident the need for improvement and no matter how promising different approaches may be in improving the program’s performance.

“It is not possible to achieve certainty in our knowledge of the empirical world, but we can devise workable approximations and act on them.” John Locke (1632 – 1704)

“In practical life, we must steer a middle course between demanding a degree of certainty that we can never have and treating all possibilities as if they were of equal weight when they are not.” Bryan Magee (20th Century Philosopher)

^I See Comments of Stephen Elbert on the merits of early involvement of all interests and the potential use of Coordinating Committees on a pilot basis.

^J “He not busy being born is busy dying.” Bob Dylan “It’s Alright Ma (I’m Only Bleeding)”

Position Statement of: **Lindene Patton**
Vice President & Counsel
Zurich Specialties

I appreciated the opportunity to participate as a member of the NACEPT Superfund Subcommittee. Each member of the Subcommittee brought a unique perspective to the deliberations and I was privileged to learn much from each and every member. I would like to thank the facilitators and Chair for the work that each performed in the face of an extraordinarily polarized group. I commend the EPA for initiating the dialogue, and hope that the Agency will continue to investigate and explore the many ideas identified in the multitude of discussions, deliberations and written works prepared by the Subcommittee members during the many months of effort.

I agree with Mr. Derouin's observations with respect to the impact of the expansion of the scope of the discussions to include funding issues. In hindsight, while some may have thought the discussion of funding would assist in the dialogue, the expansion of the discussion to encompass funding was extremely destructive, resulting in the loss of existing consensus and focus.

Missed Opportunities: Alternative Settlement Strategies, Contract Reform and Independent Audit of Program Expenditures

Overall, the breadth of issues encompassed by the charge was such that discussion of complex issues outside the experience base of the majority of the Subcommittee members was generally avoided. The Subcommittee spent the majority of its time obtaining and reviewing information about the Superfund Program itself, and testimonials related to community needs. The limited number, schedule and structure of the meetings was such that no time was provided for expert testimony on many issues of interest that could have impacted deliberations and yielded quality recommendations. Few, if any, Subcommittee members were comfortable discussing issues related to improving the performance of the Superfund Program using auditing, insurance, finance and contract reform techniques. Several Subcommittee members commented during deliberations that they needed independent expert advice to make any recommendation on auditing, finance, alternative settlements and insurance applications. Ultimately, the exigencies of time, combined with the complexity of the issues resulted in a failure to explore the issues as a group.

I refer any readers who have interest in the issues of alternative settlement strategies, contract reform, and funds leveraging using other programs to the administrative record which supports this FACA. The record should include a series of documents developed by individual Subcommittee members on specific complex topics, including two documents that I developed and distributed to members and the EPA on the subjects of alternative settlement strategies and contract reform. Additionally, prior drafts of the report and transcripts of the deliberations include specific discussions regarding recommendations related to auditing of the Agency expenditures in the Superfund Program over the last five (5) years.

I believe that the US Environmental Protection Agency could realize significant performance and financial improvements in the Superfund Program, including a substantial improvement in human health and environmental conditions, because funds could be spent more efficiently and needs would be better justified, if the following specific actions were taken:

1. **Implementation of a comprehensive audit of the Superfund Program appropriations and expenditures for the last five years.** The purpose of such an audit would be to identify where and how funds are expended in detail, especially funds which are not extramural funds used for remedial or removal actions. The Agency must establish a link between funds spent on salaries, other than extramural contracts, and environmental and health improvements at Superfund sites. Some argue that such a link would be best established using risk based techniques to demonstrate performance. From benchmarking perspective, current ratios of Agency administration costs as compared to the actual dollars spent on investigative and remedial action activities at Superfund sites are not consistent with private sector best practices. The report notes that only approximately 17% of Superfund expenditures go to site investigation and remediation costs. By implication, more than 80% of costs are spent on administrative activities. In the private environmental remediation industry world, even a 20% administrative cost load might be considered inefficient and non-competitive. In the case of the

EPA, the numbers are inverted. An audit would serve to provide the transparency necessary to explain the extreme variance is administrative cost loading. I recognize that programmatic requirements for the Agency are different from anything existing in the private sector, however, putting a price with greater description of the work on the specifics of such administrative costs would enable a much needed policy discussion about prioritization of funding within the Agency. Throughout the deliberations, the Agency employees made great efforts to supply the Subcommittee with requested data on expenditures, but despite their valiant efforts, in many cases they were unable to supply the data requested because the Agency simply did not track expenditures with the detail necessary to answer the questions asked. This situation must change if the Superfund Program is to continue its success and an audit is one of the activities necessary to get there.

2. **Estimation of orphan share liabilities at Sites on the NPL:** Throughout the deliberations, many Subcommittee members expressed the desire to understand just what true budgetary needs (in private sector terms, this would be called “liabilities”) existed within the Agency for the Superfund Program. The Agency was unable to provide any idea of multiple year financial exposure or budgetary need for the Superfund Program other than those estimated by a study conducted by a non-profit several years ago. The only other studies the Agency could point to were certain Agency reports referred to in the text of the report – but such reports only looked to single year program needs and not multi-year or present value funding requirements. Further, when asked about just how much money the Agency thought it would need to pay for clean-up of “orphan sites”, especially those that are mega-sites, the Agency not only said it was unable to answer the question because it did not even have rough estimates of the liabilities (eg costs to clean), they further indicated that to do so might impact enforcement sensitive data. With all due respect and deference to enforcement sensitive information, when pushed in discussions, EPA staff did acknowledge that the Agency does know when it is unlikely to have any recovery from PRPs – and documents do exist within the Agency which acknowledge same. In an environment where accountability and transparency are critical, where FASB standards clearly require disclosure of environmental liabilities for private sector business, and where developing GASB standards require the same for governmental agencies, it is hard to understand how the EPA can continue on without estimating its liabilities. The Departments of Defense and Energy have clearly estimated their environmental liabilities. How is it that the EPA can be treated any differently ? Some complain that the EPA cannot afford to use precious funds to estimate such liabilities. I wonder how they can afford not to. Transparency is required to assure an honest and open dialogue about public policy issues surrounding Superfund –especially budgetary needs;
3. **Mega Site Management Reforms:** I would recommend implementation of mega site management reforms far beyond those articulated in this report. I would recommend that mega sites be managed by persons with construction management and cost-engineering experience. The softening of the recommendation text in the report to include the ability to use staff who simply have negotiation skills skirts the issue and will not serve the Agency well. The hard facts may be that to implement such a recommendation, the Agency may either require workforce retraining or acquisition of human resources with cutting edge skills, and concomitant elimination of staff with obsolete skills through early retirement programs or other initiatives. I do not make this recommendation lightly. The private sector, including industries in which I have worked, learned the hard way through excessive and inefficient expenditures that construction management and cost engineering expertise is critical to cost effective and performance effective management of complex clean-ups;
4. **Contract Reform:** Please look to materials I drafted and placed into the record for suggested contract reforms. In short, I suggest exploration of the use of guaranteed fixed price remediation contracts, requirements contracts, and indefinite quantity with guaranteed minimums contracts. Other agencies have saved substantial monies implementing such reforms. Lessons have also been learned in such efforts, and the EPA should learn from the efforts of others.
5. **Settlement Reform Initiatives:** Please look to the administrative record for detailed reports which I submitted on alternative settlement strategies. In short, I suggest that credit risk for the EPA and many PRP's increases over time. Said otherwise, where a PRP is financially unstable, the likelihood that the entity will declare bankruptcy or become otherwise unable to pay its liabilities increases with time. If all or most PRP's on a site become insolvent, the EPA will likely be left to pay the bill through the Superfund Program. In private industry, to avoid being left with an insolvent debtor, creditors make professional judgements about when to settle disputes to avoid being left with the entire bill. I suggest that to avoid increasing insolvency risk and bad debt risk that the EPA should, in conjunction with or as part of the

audit suggested above, perform a multi-years needs and credit risk analysis for each Superfund Site. Where credit risk is substantial, the EPA should look to alternative settlement strategies, including fair share allocations and integration of financial instruments such as insurance, to minimize future liability (budget needs) for the program. Such actions can proceed in a way to avoid forfeiture of basic programmatic liability enforcement schemes, consistent with current administrative policy reforms, and in a manner which improves ultimate protection and human health and the environment.

Position Statement of: **Vicky Peters**
Senior Assistant Attorney General
Natural Resources and Environment Section
State of Colorado

With Concurrence of Aimee Houghton, Doris Cellarius, Jason White, Ed Lorenz, Dolores Herrera, Alexandra Shultz, Grant Cope

I also endorse: “Top 10 Issues To Protect Public Health and The Environment at Superfund Sites” (See Jason White’s appended statement); State Superfund Managers’ Statement (except the endorsement of first bullet for national review by headquarters of NPL-candidate sites); Ed Putnam’s statement on the role of cost in listing; Alexandra Shultz’s discussion regarding many of these same issues and the importance of pollution prevention, environmental compliance and effective financial assurances.

Regarding the Role of Risk in the Superfund Program

Absent a dramatic paradigm shift, risk assessment will continue to be a necessary but imperfect tool in the Superfund program, as well as every other pollution control program. In Superfund, the question of risk is raised at every stage of the process: 1.) whether the site poses sufficient risk to warrant listing on the NPL; 2.) what cleanup is necessary to ensure that unacceptable risks are eliminated, i.e., “how clean is clean?”; 3.) whether risks warrant accelerated response, e.g., through a removal action, or a higher priority remedial action; and finally 4.) whether the success of the Superfund should be measured by risk reduction achieved. The Subcommittee did not address the second question and disagreed on the other three.

Consideration of Risk in Listing Decisions

Generally the Subcommittee agreed that the NPL should reflect sites that pose a significant risk to human health and the environment and that likely will not be adequately cleaned up absent the resources available to sites listed on the NPL. We did not define “significant” risk^K. This is not surprising. For several years, scores of stakeholders, lobbyists and Congressional staff attempted to define “NPL caliber” sites and exclude them from Voluntary Cleanup Program Agreements and proposed legislation. The exercise proved futile; instead, these agreements and the “Brownfields” statute exclude sites that have entered into the Superfund assessment process.

I believe that the determination of “significant risk” should be generally consistent with the level of risk posed by sites that have been proposed for listing in the past 10 years or so, (as adjusted through implementation of Recommendation 4), and should be based on the application of a standard set of criteria, rather than a comparison among NPL-candidate sites in any given year. A site that has been sent forward by an EPA region as posing a significant risk should be listed regardless of how much it costs and how soon funding can be made available for its cleanups; otherwise, communities at sites left off the list could actually experience greater threats than some sites put on if the competition for the former was greater or funding less in the year(s) they are considered.^L

Criticisms that the HRS has not been screening out enough sites fell into two groups^M: a.) current or potential exposures predicted by the HRS could be disproved with site-specific data; and b.) the

^K We also did not agree what constituted “adequate” cleanup, but I am not addressing that issue.

^L See also comments submitted on this subject by Ed Putnam.

^M Community, environmental, tribal, and State members also questioned whether the current listing process has kept pace with our growing knowledge of risks via pathways such as vapor intrusion and subsistence lifestyles, among other things.

HRS does not reflect risk, and allows the listing of sites with “hypothetical potential future risks.”^N The prior criticism should be addressed by Recommendation 4.

The terms, “current actual risk” versus “potential future risk,” are themselves confusing, as risk inherently refers to the future. People who are currently exposed and suffering adverse effects are not “at risk;” they are injured. I believe, however, that the term, “potential future risk,” is meant to relate primarily to changes in land/water use and also, perhaps, to potential future events and/or migration. Examples of the latter, would be a tailing impoundment that might fail under certain conditions, or buried contaminated sediments that could be disturbed by certain natural or anthropogenic circumstances. Regarding such cases, I cannot agree to a blanket policy that would preclude EPA from listing such sites, or assign them a priority so low that they are never addressed. Only people familiar with the site, who could judge, with the input of other stakeholders, the likelihood of such events transpiring, and the potential for harm, should decide whether such sites pose a significant risk to human health and the environment.

I do not support spending hundreds of millions of dollars to address contamination that could not reasonably result in unacceptable exposures to humans or the environment. Unfortunately, the Subcommittee cannot prescribe good judgment. As long as the event does not occur, of course society is better off addressing on-going exposures. If such occurrence does occur, however, and results in serious adverse effects, or greatly increased cleanup costs, society is ill-served. Therefore, the listing of such sites should not be automatically precluded, but rather, such decisions should be left to the regions as informed by the outreach suggested in Recommendation 3.

Apart from the future event scenario, as discussed above, I cannot support precluding the listing of a site with no current exposure for three reasons: first, I have seen from personal experience how quickly land use can change. Development moves far faster than Superfund. Houses have been built on or immediately adjacent to contaminated sites that were not cleaned up a few years ago because residential use was not “reasonably anticipated” by EPA project managers. Second, allowing contamination to migrate to human or ecological receptors before taking action is ill-advised because cleanup costs would increase, and greater injuries to natural resources would occur in the process. In either instance, allowing individuals (or ecological receptors) to suffer exposure before addressing known contamination would, in my view, be unconscionable. Third, even if exposures could be averted indefinitely, the resources would remain injured and unproductive. CERCLA was passed not only to protect against on-going threats but also to mitigate the occurrence of national sacrifice areas. Regions and stakeholders are best able to weigh these considerations and determine when listing is appropriate.

Consideration of Risk in Prioritization of Sites on the NPL

Critics have for years admonished EPA and DOD/DOE to incorporate the principle of “worst first” into their cleanup programs. While cleanup of the most contaminated and dangerous sites first is a laudable goal, much of such criticism reflects a lack of understanding of the complexities of the sites addressed by these programs, as well as the issues involved in risk assessment. For example, in ranking risks to human health, how would one decide which is worse, cancer or lupus; chronic respiratory infections or decreased sperm count? Toxicity includes not only the concentrations at which chemicals are found but also the severity of their effects. If one site has toluene orders of magnitude over a drinking water standard and another has nitrosodimethylamine (carcinogenic at parts per trillion level) barely above a risk-based level, which site is worse? What if the receptors include an environmental justice community where certain baseline diseases are more prevalent? Of course, the complexities would be exponentially greater if risks to the environment and ecological receptors were added. Even if such judgments could theoretically be made, the resources it would take to evaluate thousands of sites would be enormous.

Although any prioritization must consider risk in determining priorities, such consideration cannot be reduced to a quantitative ranking but rather might be subjected to broad categories such as 1, 2

^N No specific examples of inappropriately listed (or unlisted sites) were discussed by the Subcommittee.

and 3^o. Category 1 might be sites where acute (i.e., less than 10 days) exposure could result in severe adverse effects. Category 3 might be mild effects after chronic exposure. Everything else, which would be most sites, would likely fall in-between. Even with such a simplistic approach, reasonable people could disagree on what are mild versus moderate or moderate versus severe effects, and what would be moderate for most could be severe or even deadly for sensitive subpopulations. Furthermore, the uncertainties in risk assessment render more quantitative rankings fruitless; for example, we know virtually nothing about synergistic or antagonistic effects from multiple chemical interactions, very little about the sensitivities of children and the potential for endocrine disruption in pregnant women, and are only now exploring the toxicological significance of hormesis. The usefulness of the risk assessment tool should not be oversold.

The prioritization approach that the Subcommittee was working toward, and that I endorse, would require analysis of the likelihood of exposure, (including whether there was current exposure), the degree of potential harm, including whether exposure would result in acute or chronic toxicity, the type of toxicity associated with the contaminants at the site, and the amount of toxic substances that were present, among other factors. All of these factors would be evaluated qualitatively with active participation of stakeholders from the sites, and accountability for decisions made. Such a rigorous, transparent process is more likely to result in good decisions than one in which arbitrary numerical values are assigned to various site characteristics.

The Subcommittee's unwillingness to engage in quantitative relative risk ranking should not come as a surprise. FFERDC^P had five years in which to develop a prioritization approach, (among other things); it gave up on relative risk ranking fairly early on. DOD, (glutton for punishment), continues to "quantify" relative risk in its recent Munitions Response Site Prioritization Protocol and Range Rule Risk Methodology and continues to be attacked by States because application of these models results in disparate and sometimes nonsensical conclusions.^Q DOD attempted to categorize all of its contaminated sites and were criticized because virtually all of them were designated as high risk. DOE and EPA gave up long ago.^R

Consideration of Risk Reduction in Measuring Program Progress (MPP)

EPA is also under pressure to use risk reduction measures of program progress for Superfund. Such measures would be difficult if not impossible to develop. In fact, the Work Group on MPP invested considerable time and energy in an effort to develop meaningful, transparent, clear and simple risk reduction measures that would not require significant additional expenditures to gather and collate data; however, the group was unable to satisfy these goals. This is largely due to the difficulty in defining populations at risk. EPA identifies potential exposure pathways and receptors; however, once identified, EPA does not try to quantify precisely the number of receptors, and the exact risk to which they are exposed, both of which can be transient. Nor can the agency capture averted threats to future populations because it cannot predict how adjacent areas will be developed and uses changed. What EPA can do is measure when all threats that are posed by contamination at a site are adequately addressed – i.e., deletion of the site from the NPL.

^o Regardless of such categorizations, assignments of risk must be augmented by other principles and site-specific factors discussed in the body of the report to ensure a well-managed and cost-effective program.

^P Federal Facilities Environmental Restoration Dialogue Committee

^Q See e.g., Superfund Report, January 5, 2004, "States Attack DOD Proposal for Prioritizing Munitions Cleanups."

^R EPA does apply weighting factors to "new starts" each year, but they are not limited to risk factors, and I and other members did not agree with them.

Position Statement of: **Edward Putnam**
Superfund Program Manager
New Jersey Department of Environmental Protection

This statement explains the reasoning behind my decision to disassociate with the report. A separate joint statement by the three State Superfund Managers on the committee is also included in this appendix. I also wish to support the Top 10 Issues To Protect the Public Health and The Environment at Superfund Sites.

The process used to draft this report had as an objective reaching consensus on a given statement, in order for it to be considered a “**Bolded Recommendation**”. This objective is what led to the substantial reduction in the number of recommendations from previous drafts, including those made relative to the funding to the program. Unfortunately, this objective was seemingly abandoned on the very last draft of the document. Specifically, Recommendation 1 contained a statement that if EPA were to institute a Headquarters (HQ) level review of NPL eligible sites in order to decide which sites to propose for the NPL, that review should **not** consider cost as a factor. This statement was crucial to my consent of this recommendation.

For background, HQ review of the listing packages was previously limited to a quality control review of the HRS, which by rule is the only criteria needed for listing a site. The EPA region and the state have already determined that the site requires the resources of Superfund, or it would not have been passed on to HQ. Currently, EPA HQ has developed a tiered ranking of NPL eligible sites. Once tiered, then several factors including cost, and more particular the cost to the fund, are used to determine how many of these site are actually listed in that particular cycle. The sites not proposed for listing, are not rejected, but are held over for the next cycle. This could go on indefinitely putting a particular site into “limbo”. Since the site is beyond the State’s capability, and EPA HQ is not listing it, no action then occurs with respect to the site. Such inaction is more than problematic and I cannot support a recommendation that allows it to happen. However, under the rules established for my concurrence with the document, I’m precluded from presenting another draft to reflect my non-concurrence. Thus, I am faced with no other option than to disassociate with the report for the inconsistent rules applied to the way the report was drafted.

Position Statement of: **Alexandra Shultz**
Director, Legislative and Regulatory Affairs
Earthworks

I have received the endorsement for these comments in their entirety from Dolores Herrera, Doris Cellarius, Aimee Houghton and Grant Cope

I am choosing to dissent from the report of the full Subcommittee, for the reasons described below. In making this dissent, however, I wish to offer my support and thanks to the many people who worked so hard on this panel to ensure that the Superfund program improves the lives of citizens in affected communities, as well as the environment. In particular, I would like to recognize the efforts of the tribal and environmental justice representatives, who made many personal sacrifices just to participate in the often grueling discussions of this NACEPT Subcommittee. I also wish to formally endorse the comments of Jason White, which include "Top 10 Issues To Protect Public Health and The Environment at Superfund Sites", as well as the appended comments of Dolores Herrera, Doris Cellarius, Aimee Houghton, Vicky Peters, Ken Jock, and Grant Cope.

In dissenting, I would also like to make it clear that there are aspects of the report that I do support, and that would be very important to see implemented. These include: improving collaboration with Tribal nations and potentially affected communities (parts of recommendations 2 & 3), building capacity for State and Tribal cleanup programs (recommendation 8), measuring the effectiveness of Agency coordination with Tribe, state, local and community stakeholders (recommendation 12), and the release of an EPA annual report that makes public information on program progress and spending, and information on sites considered for listing and those not listed and why. (recommendations 5 and part of 6).

Unfortunately, the negatives in this report outweigh the positives – from the flawed process, to the unacceptable language that was included, to the critically important recommendations that were left out. As such, I was unable to endorse the overall report.

Lack of Accountability on the Range of Views

First, it is extraordinary that this report has degraded into a so-called "range of views" document, when those views are not attributed to any specific Subcommittee members or stakeholders. If this were a consensus document, it would be understood that every Subcommittee member would be endorsing the recommendations as at least acceptable, if perhaps not preferable. The final report, in contrast, contains views that would leave communities and the environment in harm's way, such as using an uncharacterized idea of "present risk" as the motivating factor in listing and prioritization decisions by the EPA. Since I could not support such views, I am extremely uncomfortable with putting my name on a document that contains them.

Moreover, because EPA representatives indicated that they might use the disparate views to inform the agency's course of actions, such unacceptable language could be turned into policy. I cannot endorse that possibility. Finally, the lack of attribution on the views has left a document that lacks either transparency or accountability while criticizing the EPA for not being transparent or accountable enough on the underlying Superfund program.

Cost Should Not Be a Factor in Making Listing Decisions

I am also extremely concerned over the removal of the recommendation that the cost of cleaning up a particular site NOT be used as a factor in the decision to list or not list that site on the National Priorities List. The decision to list a site on the NPL involves assessing which sites most need federal intervention because of their severity and the inability of other programs to clean them up. Cost is not relevant to considerations of the threats a site may pose to human health and the environment, or to the speed with which a site can and should be addressed, and as such is not relevant to listing decisions. Moreover, if the cost of a cleanup is a problem, it is incumbent on the EPA to state that plainly, request that funding, and not let insufficient funding jeopardize communities or the environment. Not listing a site because of insufficient funding is abhorrent. I also wish to note that in many previous drafts of the report, Recommendation 1 included language that cost not be used as a factor in listing decisions. Yet, in the final report, this language was removed, without an explanation or any transparency about who objected or why.

“Risk,” “Segmenting Large Sites” and Inaccurate Funding Discussions are Unacceptable

Among the other issues that have prompted my inability to endorse the final report are the unattributed, industry-backed language on using present risk in listing and prioritization decisions, the discussion of the EPA’s segmenting large sites; and the flawed description over what prompted the breakdown in consensus on the proposed recommendation to request more funding for the sites that need it the most.

Omission of Recommendations:

Short-term Funding to Protect the Communities Most at Risk

Equally objectionable is what the report omits – including some of the recommendations that could have gone the farthest towards ensuring a healthy Superfund program that does an adequate job of protecting human health, communities and the environment. Chief among these is a recommendation that more money goes to contaminated sites that are stalled or stopped because of a lack of funds. It is critically important that communities and the environment impacted by heavily contaminated sites have the money they need to proceed with timely cleanup. Anywhere from \$300 million to \$800 million per year, as explained in three separate reports from the EPA Inspector General, the General Accounting Office, and Resources for the Future, is needed to make up the shortfall. Without injecting more money into the process now, communities will suffer. Many of the industry representatives on the panel were only willing to agree to such a recommendation if they could control where the funding were to go – instead of allowing the agency to use additional money to protect the communities that need it the most. The report omits the recommendation and inaccurately describes the source of disagreement.

Reinstating the Polluter Pays Fee to Provide a Stable, Long-term Source of Funding

A separate, although related, issue that the report ignores is how to ensure that the Superfund program has sufficient long-term funding. Only a stable source of funds to supply the appropriations process will enable the program to plan to cleanup severely contaminated sites in a timely manner into the future. Even finding efficiencies in the current Superfund program will at best free up 5 -10 percent (if any) of the program’s money, an amount insufficient to ensure protections for communities and the environment. The “fund” in “Superfund” should be reinstated. That will require reinstating the polluter pays fee. It is irresponsible to claim, as the EPA and the report does, that megasites are burdening the program, but not address how to get the funding that will ensure that those sites will be cleaned up.

Resources for Communities

Third, the report omits a recommendation that communities receive funding for Technical Assistance Grants if their site would have been eligible for inclusion on the NPL and if the TAG funding had not already been consumed by NPL sites. The concept that new statutory language would be needed for such a recommendation is inaccurate. Instead, the report does not deal with this important issue.

Pollution Prevention and Corporate Responsibility

Finally, but not least importantly to communities around the country that bear the brunt of the consequences of toxic pollution, are the twin issues of pollution prevention and corporate responsibility. I strongly object to the statement in the report that pollution prevention is not part of the Subcommittee’s charge. The original charge asked the Subcommittee to address issues relating to megasites and to the National Priorities List. Given that, the single biggest step that the EPA can take to protect the long-term vitality of the Superfund program is to ensure that new sites never get contaminated enough to be considered for Superfund cleanup. Barring that, the EPA should at least attempt to ensure that sufficiently solid industry-provided financial assurances are available in order to prevent any taxpayer-funded from being burdened by cleanup liabilities. It is highly disappointing that the report does not include the suggested recommendation on prevention, especially given how much stronger that recommendation could have been. Moreover, the report confuses the two issues of pollution prevention vs. corporate responsibility.

Pollution prevention should be the gold standard to which all environmental agencies and private companies are held. Once contamination has occurred, it is impossible to put the genie back in the bottle, and people and wildlife have already been exposed or put at risk of being exposed to highly dangerous contaminants. The EPA should strive to protect healthy people and environments by preventing sites from becoming toxic waste sites to begin with. There are a number of steps the EPA can and should take to achieve this goal.

1. The EPA should, for example, strongly enforce existing environmental laws such as the Clean Water Act and the Resource Conservation and Recovery Act.
2. The EPA should also take as strong a stance as possible in comments to Environmental Impact Statements shepherded by other agencies, using all the knowledge the EPA can glean from all its programs. For example, in an EIS for a mine site, the EPA could use knowledge learned from cleaning up a similar site to ensure that the preferred alternative includes sufficient mitigation measures to prevent acid runoff, or to urge the no alternative option. The EPA has taken steps to implement this sort of action recently in the EIS for the Phoenix mine in Nevada, where the EPA argued for a long-term water treatment trust fund of \$33 million, while the BLM only called for \$400,000 – an amount that would not begin to address the perpetual pollution predicted for the mine.
3. The EPA should also craft new regulations to stop pollution that is not already covered by existing authorities. For example, while mining operations are exempt from the hazardous waste provisions of RCRA, EPA retains authority to craft regulations to govern certain types of mining wastes. Yet, the EPA has failed to take action to regulate hazardous mining waste – to the detriment of communities and the environment in the Western U.S.

Corporate responsibility measures – through requirements for strong industry-funded financial assurances - are another step the EPA can take to ensure that sites do not become burdens on the Superfund program. More specifically, the EPA should exercise its authorities, such as those under section 108(b) of CERCLA and through its ability to comment on the EISs shepherded by other agencies, to require companies seeking to open new facilities to put up a sufficient pot of funding in advance to pay for any required cleanup. Strictly speaking, financial assurance requirements are not pollution prevention measures. Such cleanup money only becomes necessary if a site becomes polluted and requires cleanup. Financial assurance measures simply ensure that an already contaminated site does not become the liability of federal, state or local taxpayers. It is extremely important that such financial assurance measures require a secure source of funding, such as a bond or letter of credit just to name two. If a company is allowed to simply promise to pay out of its own existing resources – a so-called “corporate guarantee,” taxpayers will be left out in the cold if the company later goes bankrupt or makes its assets unavailable in some fashion. Such “corporate guarantees” are no better than “IOUs.” To date, a mixture of corporate guarantees and insufficient bonds have left taxpayers on the hook for as much as \$12 billion just for cleanup costs at currently operating mine sites, according to “Putting a Price on Pollution” a 2003 report by Jim Kuipers and the Center for Science in Public Participation.

Position Statement of: **Mel Skaggs**
President, InDepth Environmental Associates

I was honored to serve on the Superfund Subcommittee, and I appreciated the diligent work performed by the other members of the Subcommittee and the Chair. The facilitators also worked very hard to find consensus in the central issues and concepts that remained as the Subcommittee finalized its report. I also appreciated the efforts of the EPA Superfund staff members, who were tasked with providing information on their Program.

Many of the participants provided carefully developed work products throughout the process that contributed greatly to the group's deliberations. Since many of these work products were prepared by practitioners, they often contained insightful information and creative ideas. Some of this work did not appear in the final report. The reader is encouraged to explore these valuable resources, which are available through the Subcommittee's docket and public records.

These comments offer my individual perspectives on three topics discussed by the Subcommittee.

Expenditures Must Be Prioritized. Information presented to the Subcommittee by EPA suggested that a backlog exists of construction-ready orphan sites which lack current funding for construction. Over 70% of site cleanups are paid for with private funds from PRPs, but EPA's appropriation still must fund orphan sites cleanups and, sometimes, orphan shares of other sites. However, the Superfund program today is also funding many additional constituencies and activities unrelated to field cleanup to be funded out of its annual appropriation.

The Superfund program expenditure data provided to the Subcommittee were not consistent throughout the Subcommittee's process, nor were these data consistent with historical figures available from GAO. These issues were not fully resolved, but the fraction of the annual appropriation allocated to extramural construction at NPL sites appears to have been declining since approximately 1996. Only about 16.6% of the annual appropriation was spent for extramural remedial actions during the time period looked at by the Subcommittee (FY2002).

Using such tools as the deobligation of unspent funds from prior budgetary years, EPA's current management has implemented admirable innovative management approaches during these recent years. Nonetheless, the low percentage (16.6% of current year appropriation) being spent on extramural remedial actions left me with several lingering questions, including:

- What portions of the Program budget grew proportionately as the extramural remedial action portion shrank, and what would reverse this eight-year downward trend?
- If only 16% of current year appropriations are being spent for field construction at NPL sites, how could additional appropriations ever resolve the orphan site construction backlog that EPA described to the Subcommittee?

I never found a satisfactory answer to either question, and I ultimately concluded that growth in the non-construction ("programmatic") portions of the Program must account for this trend. If the Program's expenditure priorities were proportionately restored to those present in 1996, at least \$100 MM/year of additional money would be available for cleanup at these construction-ready orphan sites. Comparing the alternatives of expenditure reprioritization or simple appropriation increases, I concluded that such reprioritization would be a superior way to increase construction funds available for use at these backlogged construction-ready orphan NPL sites.

Recommendations for Numerous New Studies Will Divert Resources From Clean Up. This understanding of the spending trends raises troubling questions in light of the contents of this report. The report contains numerous non-consensus suggestions of different ideas for EPA to consider, and many of these suggestions individually sound very appealing. To illustrate this point, by my count, this document contains suggestions that EPA develop 38 separate new regulatory processes/guidances, conduct up to 47 new studies, conduct 6 formal multiparty "dialogues" on various topics, etc. In all, if everything suggested in this report were implemented, 99 new regulatory efforts would be initiated, each drawing resources from the Program. I was unable to

ascertain what the cumulative costs might be to implement such activities, or whether there would any budget left at all for remedial construction after doing so.

Some of the Subcommittee's suggestions and Recommendations could provide the benefit of more efficient contracting mechanisms, improved understanding of where the Program expends its resources, etc., and I particularly endorse these. I also generally support the recommendations which would help the Agency understand how to better prioritize its expenditures to address site-specific current risks. The remainder of these studies, recommendations, new guidance/procedures/etc. that do not yield more resources for field construction generally will not be helpful and should, in my opinion, be avoided.

I believe the Subcommittee might have been more helpful to the EPA had it instead found 99 current ongoing Superfund funded studies, guidances being developed, and processes to recommend be discontinued. Unfortunately the Subcommittee did not see any information useful to this task, so I can only voice support for the audit recommendation and hope that it will provide the Agency the information necessary to achieve such a redirection of resources on its own.

Use Of Other Programs to Cleanup Mega Sites. I began my Subcommittee service expressing support for "using all of the tools in the tool box" for cleaning up sites, and I saw much good information to support this approach. Two decades of maturation of the remedial regulatory processes have given us effective new cleanup "tools" such as the Great Lakes Legacy Act, Brownfields Act, experienced state cleanup programs, RCRA Corrective Actions, and the Water Resources Development Act (WRDA).

Various practitioners provided the Subcommittee with very detailed information on the successes of various different state and federal programs in cleaning up sites across the country. However, as noted above, this information often does not appear in this final report but it definitely should be accessed in the Subcommittee's docket.

One example of such a new non-Superfund remediation "tool" is the Urban Rivers Restoration Initiative (URRI) under WRDA. In Section III, the report suggests "EPA should explore options such as memoranda of agreement or other arrangements with non-NPL programs to further coordination and ensure that EPA's statutory authority is not impaired." (III-48) The report contains a similar statement on III-52 with regard to other USACE waterway programs.

The EPA and USACE have already demonstrated how such an agreement can be effectively utilized in the Urban Rivers Restoration Initiative. The USACE and EPA began pilot testing this alternative approach for the restoration of degraded urban rivers over two years ago. This program is discussed in the final report at page III-47. The program is currently being tested at eight national pilot sites, under a Memorandum of Understanding (MOU) between USACE and EPA. The July 2, 2002 MOU requires that all of EPA's CERCLA, RCRA and CWA regulations be met under this cooperative new program. Of course, USACE has already built considerable remediation expertise overseeing the design and implementation of numerous upland Superfund site remedies for EPA at sites all across the nation.

Alternative cleanup programs such as URRI permit EPA to leverage both cash and human capital resources – achieving more site cleanups with fewer resources. The urban rivers restoration program offers the participants partial federal funding to address orphan shares in a class of sites where many hazardous substances dischargers may be unknown or quasi-governmental.

The USACE has over 100 years of experience in planning, designing, and executing comprehensive solutions to complex water and related land resource problems. The agency's expertise has been developed over that time from extensive watershed management work, including responsibilities for 25,000 miles of commercially navigable waterways, numerous inland lakes and reservoirs, and almost 300 deep draft harbors, many of which are located in urban areas. USACE statutory authorities overlap geographically and functionally with many non-point source watershed contamination, NPL-eligible sites, and other problem areas.

In a precursor to the URRI program, WRDA served an important role coordinating multi-authority funding for the Ashtabula Harbor, Grand Calumet/Indiana Harbor and other cleanups. Further, the Great Lakes WRDA program alone has already provided over \$580 million for contaminated

sediment response actions at nineteen different Great Lakes Areas of Concern over the past thirteen years.

Much has been learned about interagency, public-private partnership approaches such as the URR, earlier WRDA-based programs, and the early years of the URR program itself. However, even more will be learned as the URR pilots projects move through the partnering process. In my opinion, it is critically important for our society to take advantage of these lessons as we address mega sites.

Citations are provided below to give additional detailed information on this specific alternative cleanup program. The reader is encouraged to review them or to discuss the program with practitioners such as Dr. Jonathan Deason of George Washington University.

The development of cooperative MOUs between EPA and the alternative cleanup programs obviously can be achieved by following the model of URR. Such utilization of "all the site cleanup tools in the toolbox" is an essential part in freeing Superfund resources to respond more effectively at the back-logged construction-ready NPL orphan sites where the Program needs to refocus its resources in the coming years.

URR References

- Deason, J.P., "Urban River Restoration Initiative: Key to Brownfields Redevelopment Success in Urban River Corridors," *Brownfields 2000 – Research and Regionalism: Revitalizing the American Community*. Washington, DC: U.S. Environmental Protection Agency, 2000.
- Deason, J.P., "Passaic River Restoration Initiative: A New Model for Cleaning Up Our Nation's Contaminated Urban Rivers." *Proceedings of the EPA Forum on Managing Contaminated Sediments at Hazardous Waste Sites*. Alexandria, Virginia: U.S. Environmental Protection Agency, May 30, 2001.
- Deason, J.P., "Cry Me a River: The Passaic River Restoration Provides a Nationwide Model for Addressing Polluted Urban Rivers." *Pollution Engineering*, September 2001.
- Deason, J.P., "Natural Resource Trustee Partnering in the Urban River Restoration Initiative," *Federal Facilities Environmental Journal*, Volume 14, Number 4 (Winter 2004), pp. 45-59.
- Fuglevand, P.F. and Deason, J.P., "Integration of WRDA Restoration and CERCLA Remedial Processes at Urban Waterway Superfund Sites." Invited presentation to the EPA Technical Support Project General Meeting, San Diego, California, May 10, 2001.
- Fuglevand, P.F. and Deason, J.P., "Meeting the Challenge of Contaminated Urban Rivers Using an Integrated WRDA/CERCLA Approach." Invited paper presented at the American Society of Civil Engineers Conference "Dredging '02", Orlando, Florida, May 7, 2002.
- USEPA and USACE, Memorandum of Understanding Between the U.S. Environmental Protection Agency and the U. S. Department of the Army, "Restoration of Degraded Urban Rivers," July 2, 2002.
- USEPA and USACE, "Urban Rivers Restoration Initiative," July 2003 (announcing selection of the second group of four pilot sites).
- See also <http://www.epa.gov/oswer/landrevitalization/urbanrivers>

Position Statement of: Richard B. Stewart

Professor, Center on Environmental and Land Use Law
New York University – School of Law

The Subcommittee's Report, which I have joined, is, notwithstanding the best efforts of most participants, very much a lowest-common-denominator document.^S As a result, it largely fails to come to grips with the Subcommittee's charge of helping EPA to frame and resolve the tough choices presented in setting Superfund program priorities in the context of limited resources. In retrospect, it would have been more helpful to EPA for us not to have sought consensus, and instead set forth differing views. Some Subcommittee members believe that the current Superfund program is basically sound and the primary need is more money. By contrast, I find that the program is gravely flawed and requires fundamental change to achieve its goal of preventing significant threats to health and the environment.

The current Superfund program suffers from pervasive defects of both substance and management. As a substantive matter, the program wastes scarce resources and undermines health and environmental protection by failing to target resources effectively on significant risks. This substantive failing is rooted in EPA management failures. EPA has failed to develop the comparative risk information and analysis and the budgeting and program tracking systems necessary to ensure that program resources are targeted on cost-effective means for preventing important threats instead of being wasted on minor or hypothetical risks.^T The failures have been compounded by lack of transparency in EPA decision-making regarding Superfund priority setting and cleanup policies. These several failures prevent meaningful progress and disserve the interests of the public in effective protection as well as the interests of the taxpayers and consumers of business products who ultimately finance the Superfund program. These failures also severely handicapped the Subcommittee's ability to carry out its charge, including "Clarify how the money is used and what you get for it." (Report, p.A-I-4)

Over the past 25 years, EPA has failed to develop basic information, based on site-specific data and realistic analysis, on the comparative risks posed at different sites and portions of sites. Instead, it has relied to a considerable extent on default assumptions and hypotheticals, often unrealistic and highly conservative, to screen sites for NPL listing through the HRS and make remedial decisions. It has relied on measures of construction activity rather than the environmental "bottom line" – risk reduction -- to define program performance. While risk is not an objective "fact" that can readily be measured, the discipline of risk assessment has progressed to where it can usefully assess the comparative risks posed by hazardous substances at different locations and guide regulatory and remedial priority-setting. Increasingly, other EPA program offices have successfully used risk analysis to set priorities and adopt regulatory standards. OSWER's failure to follow suit can not be justified by the notion that risks at hazardous waste sites are so inherently complex or difficult as to defy analysis.. The risks in question are not inherently more complex than, for example, the risks of air pollution, which have been analyzed by the EPA Air Office with substantial success.

^S Jim Derouin's statement explains some of the reasons for this unfortunate result.

^T One independent study of Superfund remedial decisions found that nearly 80% of measured costs at a sample of sites were incurred for measures to address potential future risks based on changes in land use as opposed to current risks created by current exposures and land uses. See James T. Hamilton and W. Kip Viscusi, *The Magnitude and Policy Implications of Health Risks from Hazardous Waste Sites*, in *Analyzing Superfund, Economic, Science, and Law* 55 (Richard Revesz and Richard B. Stewart, ed. 1995). [hereinafter *Analyzing Superfund*]. See also Stephen G. Breyer, *Breaking the Vicious Circle, Toward Effective Risk Regulation* (1993) (documenting unrealistic and excessively conservative EPA risk assumptions). EPA. On the other hand, EPA remedial decisions also often ignore adverse health and environmental impacts of the remedies chosen. See, e.g., J. Paul Leigh and Alan Hoskin, *Hazards for Nearby Residents and Cleanup Workers of Waste Sites*, 45 J. Envtl. Mgmt. 331 (May 1999)

In addition to EPA's longstanding failure to develop appropriate measures of comparative site risks, the Subcommittee's inquiries disclosed that EPA has failed to develop adequate accounting and program tracking systems for remedial expenditures that would permit an evaluation of the relative health and environmental protection benefits achieved by different remedial measures in relation to expenditures. Such systems are essential in order to undertake intelligent priority setting and ensure that consumer and taxpayer monies are being spent in a cost-effective manner so as to maximize health and environmental protection. Program accountability has been further undermined by OSWER's consistent practice of adopting Superfund remedial and spending policies almost entirely through guidance and other informal means. It has avoided rulemaking, which would assure greater decision-making transparency, discipline and public accountability through the notice and comment and regulatory impact analysis processes. As a result, the performance of the Superfund program remains extraordinarily opaque and resistant to meaningful outside review and evaluation, including by the Subcommittee.

Notwithstanding these management deficiencies, independent academic studies have succeeded in using comparative risk analysis to evaluate aspects of the Superfund program. They have found faulty priority-setting, which results in serious waste of resources. For example, studies disclose that there is a very wide range in the effectiveness of program expenditures in reducing health and environmental risks at different sites.^U The information shows that if more of existing Superfund resources were shifted toward the more serious risks and spent on remedial measures that provided greater risk reductions relative to their cost, the Superfund program could deliver a significantly higher level of protection to the public health and the environment than it currently does.

Past failures do not excuse their continuation. Steps must be taken to ensure better program accountability and begin development of the information that will enable program resources to be targeted on those sites or portions of sites and those remedial measures that will achieve the greatest reduction in health and environmental risks. The basic implications for the issues posed to the Subcommittee are straightforward:

NPL Sites The HRS should be changed and focused on more realistic measures of the comparative risks posed by different sites, based on site-specific data including exposure data. Only those sites posing the comparatively more significant risks should be selected as NPL-caliber, with a strong headquarters role to ensure this result. Remediation of these sites should aim at addressing the most important risks, with priority on protecting populations against current as opposed to hypothetical future exposures and preventing the spread of contaminants that would pose significant risks to health and the environment. In selecting and funding remedial measures, priority should be given to those that are the most cost-effective – i.e., those that provide the greatest reduction in risks relative to their cost. Further, systematic use should be made of other cleanup programs to remediate NPL-caliber sites, in order to conserve Superfund resources for those important risks that can not be addressed by other means.^V

Megasites The need for risk-based priority setting and use of the most cost-effective remedial measures is especially acute in the case of megasites, which have an average cost \$140 million as compared to than average cost of \$12 million for a non-megasite. Given the costs involved, common sense dictates devoting greater resources at megasites to evaluating comparative risks,

^U See sources cited note 1; Shreekant Gupta, George Van Houtven & Maureen L. Cropper, *Do Benefits and Costs Matter in Environmental Regulation? An Analysis of EPA Decisions Under Superfund*, in *Analyzing Superfund*; Shreekant Gupta, George Van Houtven, & Maureen Cropper, *Paying for Performance: An Economic Analysis of EPA's Cleanup Decisions at Superfund Sites*, 27(3) *RAND Journal of Economics* 563 (Autumn 1996) *reprinted in Valuing Environmental Benefits* 375 (Maureen Cropper ed., 1999); James T. Hamilton and W. Kip Viscusi, *Calculating Risks? –The Spatial and Political Dimensions of Hazardous Waste Policy* (MIT Press 1999); Katherine D. Walker, March Sadowitz and John D. Graham, *Confronting Superfund Mythology: The Case of Risk Assessment and Management*, in *Analyzing Superfund*.

^V See Mel Skaggs' statement for further discussion of this issue.

targeting the most significant risks, evaluating alternative remedial strategies, and selecting those that will achieve the greatest reductions in risk with the resources available.^W

Measuring Program Progress. EPA should, similar to what it has already done in a number of its other programs, develop measures of the risk reduction benefits achieved by Superfund and the costs incurred in achieving those benefits as the basic measures of program performance. The measures of performance progress used by the RCRA program would be a beginning.

Program funding is an issue that was not part of our charge but was insistently pressed by many Subcommittee members. I am unwilling to support increased program funding at this time, for three reasons: (a) the systemic waste in the current Superfund program, due to lack of risk-based priority-setting;; (b) EPA's practice of spending a disproportionate amount of program funds on administrative staff relative to cleanup; (c) the circumstance, confirmed by EPA's Science Advisory Board, that the risks addressed by the Superfund program are low relative to those addressed by other EPA programs.

24 years after Congress established the Superfund program, we should know how well it is doing in actually reducing risks to the public and the environment. We should also know how much risk reduction it is achieving in relation to the societal resources committed to clean up. EPA has failed even to begin to ask, much less answer these bedrock questions. It is imperative to make a beginning now, and set the Superfund program on track to achieving its important objectives.

^W See Tom Newlon's statement for further discussion of this issue.

Position Statement of: **Jason White**
Environmental Specialist, Office of Environmental Services
Cherokee Nation

Top 10 Issues to Protect

Public Health & The Environment at Superfund Sites

This document describes pro-active positions of the representatives listed below on key issues on which the report by EPA's National Advisory Committee on Environmental Policy and Technology's Superfund Subcommittee report contains a "range of views." These members agreed upon the following positions that maintain or increase Superfund's ability to protect public health and environmental quality.

I. A Weakened Superfund Cleanup Program

In recent years, the Superfund program has suffered severe funding shortfalls, dramatic declines in the pace of cleanups, and an inability to conduct cleanups at some of the nation's most contaminated toxic waste sites. Program funding has declined from \$1.7 to \$1.3 billion—over 30% using inflation adjusted dollars—between 1993 and 2003. Since 1995, with the expiration of Superfund's dedicated funding mechanism, taxpayers have increasingly paid for the cleanup of abandoned Superfund sites and the running of the Superfund program. Now, in 2004, taxpayers, rather than industries, will pay 100% of such costs. The number of annual cleanup completions has fallen over 50% since the last half the 1990s. The following list built upon consensus contains ten concrete steps to address these problems.

II. Pro-active Initiatives to Protect Public Health and Environmental Quality

- 1) **Increase Funding and Reauthorize Superfund's Fees:** The Administration and Congress should agree to increase funding for the Superfund program by \$300-\$800 million annually^x, and should support and sign into law a reauthorization of Superfund's polluter pays fees;
- 2) **List Sites for Clean Up:** EPA headquarters should not consider the potential costs of a cleanup or budgetary shortfalls in making listing decisions. However, EPA headquarters should generally defer to regional proposals to list toxic waste sites on Superfund's national priorities list;

^x Three reports provide the factual foundation for this range. First, *Resources For The Future* reported that the Superfund Program would likely need level or increased funding throughout this decade to adequately fund cleanups. Katherine Probst, et al., *Superfund's Future; What Will It Cost?* (1999). However, actual appropriation have been \$300 to \$800 million below RFF's inflation adjusted base and high estimates. Second, EPA's 2004 Inspector General report released agency documents demonstrating that the resource needs for activities included in the FY 2002 Remedial Action Advise of Allowance (i.e. remedial actions; long-term response actions; five-year reviews; enforcement fairness projects; above-the-base removal actions; and redevelopment/reuse projects) is nearly three times the budgeted amount of \$224 million. (EPA Inspector General, *Congressional Request on Funding Needs for Non-Federal Superfund Sites*, Rpt. 2004-P-00001 (Jan. 7, 2004); EPA, *Memorandum from Elaine F. Davies to Superfund National Program Managers*, OSWER 9275.1-04 (Jan. 3, 2002). Third, the General Accounting Office also recently reported that over the last ten years the Superfund Program has suffered a decline in funding of \$672 million adjusted for inflation.

- 3) **Better Integrate Stakeholders:** EPA should increase its outreach to affected and impacted communities, tribes, states, and EJ groups during the listing process, including providing funds for TAGs at non-NPL sites where such funds do not reduce the availability of funding at NPL sites;
- 4) **Promote Protective Listing Decisions:** The HRS and listing process should capture the core value of tribal concerns and EJ principles, and non-traditional threats such as vapor intrusion and explosives;
- 5) **Strengthen Long-Term Protections:** Bolster the long-term management of toxic waste sites by reducing the reliance on Institutional Controls (ICs), including land use controls, strengthening enforceability and tracking mechanisms, and expanding resources for long-term stewardship;
- 6) **Improve Institutional Coordination:** Increase ATSDR and NIEHS' responsiveness, accountability, and funding to address concerns of impacted communities and states, create guidance on declaring a "public health emergency" that details when citizens can obtain health services, and craft community report cards;
- 7) **Prevent Future Sites:** Strengthen pollution prevention efforts by creating section 108(b) financial assurance regulations and expanding prevention activities at facilities at risk of creating NPL sites;
- 8) **Increase Funding To Other Programs:** The federal government should increase funding to state and tribal programs to help them maintain and increase their capacity to clean up toxic waste sites;
- 9) **Use Effective Measures of Success:** EPA should use clear, verifiable, performance measures that are based on readily available data and that reflect progress in the actual cleanup of sites not elaborate calculations of exposure control or risk reduction; and
- 10) **Quickly Address Threats:** EPA should use Superfund's existing legal authorities to prevent and clean up contamination threatening public health and the environment, including at Federal facilities.

Signed,

Aimee Houghton
Center for Public Environmental Oversight

Alexandra Shultz
Legislative and Regulatory Affairs
Earthworks (formerly known as Mineral Policy Center)

Dolores Herrera
Environmental Justice

Doris Cellarius
Sierra Club

Ed Putnam
State of New Jersey

Grant Cope
Environmental Attorney

Jason White
Office of Environmental Services
Cherokee Nation

Ken Jock
Environmental Division
St. Regis Mohawk Tribe

Mildred McClain
Harambee House, Inc./Citizens For Environmental Justice

Victoria Peters
State of Colorado

Appendix I:

Revised Charge to the Subcommittee

Superfund Subcommittee

National Advisory Council for Environmental Policy and Technology

Charge

REVISED 6-19-02 Following Subcommittee Discussion on 6-18-02

BACKGROUND:

In July 2001, the Deputy Administrator directed the development of an action plan to address the recommendations in the Resources for the Future (RFF) report to Congress, *Superfund's Future, What Will It Cost?* Specifically, the plan called for the creation of a Superfund Subcommittee under the auspices of the Agency's National Advisory Council for Environmental Policy and Technology (NACEPT).

In the fall of 2001, the Agency enlarged the Superfund Subcommittee's scope to reflect consideration of the Superfund program in context with other federal and state waste cleanup programs. This broader focus will consider how the Nation's waste programs can work together in a more effective and unified fashion, so that citizens can be assured that federal, state, tribal and local governments are working optimally to make sites safe for their intended uses.

STATEMENT OF TASK:

The overall intent of this effort is to assist in identifying the future direction of the Superfund program in the context of other federal and state waste and site cleanup programs. Specifically, the Superfund Subcommittee will review the relevant documentation and, to the extent possible, provide answers to the questions that are attached and that relate to: a) the role of the NPL, b) mega sites, and c) measuring program performance.

During the period of Subcommittee activity, additional issues may arise for which the Agency will seek Subcommittee input. If this occurs, EPA will identify specific issues or questions for which advice is sought and provide appropriate documentation.

LEVEL OF EFFORT:

1. The Agency shall furnish the necessary personnel, material, reports, background documents and facilities needed for the Subcommittee activities.
2. It is expected that the Subcommittee activities will be accomplished by a series of meetings over about an 18 month period.

3. It is anticipated that one or a series of consensus reports will result. However, where consensus cannot be reached, a written discussion of the different opinions of Subcommittee members is to be provided.
4. The scope of the Subcommittee, as identified in the Statement of Task, will not change without agreement of both the Subcommittee and the Agency.
5. For additional issues for which the Agency will seek Subcommittee input, it is understood that these issues would not replace the main focus of the Subcommittee as identified in the Statement of Task. For these additional issues, the Subcommittee response may be in the form of a “consultation,” i.e., dialogue, rather than a formal written report.
6. The Subcommittee may, at its discretion, make use of separate working groups to address specific issues. The Agency will support the activities of these working groups in the same manner as will be provided for the Subcommittee itself.
7. The Subcommittee will operate as and be subject to the requirements of a FACA Committee.

ROLE OF THE NPL:

The process to place sites on the NPL has become increasingly contentious since the Superfund program’s inception. Some stakeholders support the notion that the NPL is most appropriately a “tool of last resort.” Others believe the current process inappropriately emphasizes keeping sites off the list. Perceptions aside, sites placed on the NPL are typically those with either recalcitrant or no potentially responsible parties (PRPs), those where States lack funds to perform cleanup, those considered Federal facilities, or where tribal, trustee, or affected community pressure is applied. Other cleanup avenues include the Resource Conservation and Recovery Act (RCRA) program, the relatively new Brownfields program, Federal agency response programs, Leaking Underground Storage Tank Program, State deferral or voluntary cleanup programs, and EPA’s use of so-called “NPL-equivalent” cleanups and large-scale removals.

Among the issues that will be addressed are the following:

1. What should the role of the NPL be in addressing waste cleanup and what does it mean to be placed on the NPL?
 - a. What should be the relationship between the NPL and other cleanup programs?
 - b. How to best ensure an adequate level of cleanup?
 - c. How to integrate the NPL with other programs/statutes (NRD, CWA, Brownfields, etc.)?

- d. Should the NPL be a “tool of last resort?” In particular, what is the appropriate role of non-NPL cleanups and States in addressing sites?
 - e. What are the impacts/implications of placement on the NPL (funding, community, etc.)?
 - f. How can EJ concerns be more effectively integrated into the implementation of the NPL (e.g. synergistic and cumulative impacts)?
 - g. What is the appropriate use of the NPL in the context of mega sites (e.g. river basins)?
 - h. What are the issues associated with the goals of remediation and economic redevelopment?
- 2. Who should be involved in determining what sites are listed (e.g., states, tribes, and communities)?
 - a. What should the nature of their involvement be?
 - b. Should their role differ depending on the site type or risk?
 - c. What is the role of local authorities?
 - d. What is the role of communities (in listing, risk assessment methodology, etc.)?
 - e. How can the role of ATSDR (or equivalent) be integrated at non-NPL sites?
- 3. What kinds of sites belong on the NPL?
 - a. Should the NPL be used for a more limited range of sites?
 - b. How can Tribal sites be addressed more effectively through the NPL? (How can cultural and subsistence-living factors be integrated more effectively?)
 - c. What is the role of Risk (ecological, human health) in determining which sites should be on the NPL?
 - d. What are the technical criteria for listing a site?
 - e. What should the interaction be between the removal and the remedial programs?
 - f. What are the broader issues of NPL listing (stigma, etc.)?

Information Needs

- 1. Assess the relative costs of using other cleanup programs as alternatives to the NPL.
- 2. Determine whether EPA has used the citizen petition process to add sites to the NPL. If so, how?
- 3. Identify the other remedial/cleanup alternatives and their obligations/requirements (RCRA ToSCA, state standards, etc.).
- 4. Identify other funding sources (non-EPA public sources, private funding).
- 5. Assess the issues behind “recalcitrant parties”.
- 6. Understand EPA guidance on the listing process.
- 7. Assess the characteristics of other cleanup programs that have made them more or less successful than the NPL. What kind of sites were involved (cost complexity etc.)?

8. Gain a better understanding of the HRS and the application of the “magic number.”
9. Assess community acceptance of NPL listing vs. voluntary cleanups.
10. Determine what types of sites are typically listed on the NPL. (Is it true that “sites placed on the NPL are typically those with either recalcitrant or no potentially responsible parties (PRPs), those where States lack funds to perform cleanup, those considered Federal facilities, or where tribal, trustee, or affected community pressure is applied?)
11. Assess the use of 106 Orders (and funding to implement).

MEGA SITES:

The RFF Superfund cost study defined mega sites to be those NPL sites where cleanup costs (i.e., total removal and remedial action costs) exceed \$50 million. Mining and contaminated sediment sites are often considered synonymous with mega sites, although the majority of mining and sediment sites are not mega sites, and vice versa. RFF indicated that cleanup costs for mega sites are among the major variables driving future program costs. Mega site cleanups, especially those tied to mining and contaminated sediments, are also often difficult and time consuming.

Among the issues that will be addressed are the following:

1. Should costs be the determining factor when designating sites as mega sites or should other factors such as complexity or geographic size be considered?
2. What are the reasonable policy options for addressing mega sites?
 - a. Are there viable alternatives to placing mega sites on the NPL and/or ways of containing their costs (for example, listing only the highest priority portions of the sites)?
3. What are the unique aspects of mega sites that might require a different decision making process for NPL listing?
 - a. Large geographical distribution (e.g. river basins)
 - b. Slow rate of progress
 - c. Risk management challenges
 - d. Factors specifically relevant to Federal Facilities
4. How to integrate long-term stewardship in the cleanup/management of mega sites?

Information Needs

1. Confirm the characteristics that drive the costs of mega sites (quantity of material, etc.).
2. Confirm the list of all sites defined as “mega sites.”

3. Bring in outside experts to help frame the discussion around issues where the committee may be missing expertise.
4. Clarify the federal budgeting process and how mega sites are funded.
5. Summary of RFF study.
6. Clarify EPA's position on liability/cleanup responsibility for state/private/other ownership.
7. Determine the impact of PRPs protecting their assets.

MEASURING PROGRAM PROGRESS:

For approximately the last seven years of the Superfund program, construction completion has been the program's key measure of progress for sites on the NPL. However, this milestone only reflects the final outcome of years of analysis, cleanup work, and effort at NPL sites. Construction completion neither measures nor characterizes the impacts of cleanup efforts on human health and the environment. Furthermore, construction completions do not correlate as milestones for non-NPL cleanups or with efforts at other hazardous waste cleanups. In the past few years, the Resource Conservation and Recovery Act (RCRA) program developed indicators to gauge the impact of its efforts on human health and the environment. The Superfund program has capitalized on RCRA's efforts and conceptualized similar indicators for Superfund work. Nonetheless, there still are few cross-program metrics to capture comprehensive outcomes for interim work. This void impedes the Agency's ability to communicate work at hazardous waste sites to the public, Congress, States, and the regulated community. The Agency expects to share new measure proposals with the panel and will seek feedback from the Subcommittee on those proposed measures.

Among the issues that will be addressed are the following:

1. What criteria should be used to measure progress?
 - a. Should environmental indicators be established that are consistent among environmental programs?
 - b. Review the definition of construction completion and the relationship between that and "really being done."
 - c. Determine the role of public/community values in determining progress (e.g. cultural, social, subsistence lifestyles).
 - d. How to address and respond to remedy failures?
2. Who should be involved in measuring progress and defining success?
 - a. What is the role of communities and other parties?
3. What is the long-term effectiveness of institutional controls (particularly enforcement), containment and natural attenuation?
4. How to integrate long-term stewardship into the goals of the Program?
 - a. How to assure responsibility?
 - b. How to fund for long-term stewardship?

Information Needs

1. Clarify how the money is used and what you get for it.
2. Determine how communities feel about the program. Is there consensus about what communities identify as success and progress?
3. Assess the impacts/implications of economic redevelopment vs. remediation.
4. What are the timing assumptions for construction completion (speed of cleanup)?
5. What are the institutional controls available for monitoring and long-term stewardship?
6. What environmental indicators do other cleanup programs use?
7. What factors influence whether a resource is useable (cultural factors, factors influencing subsistence lifestyles etc.)?
8. Determine the steps for communities to assess their own measures of success.
9. Determine how to measure long-term treatment scenarios for those sites that do not reach construction completion.
10. Identify Congressional perspectives on success.

Appendix II:

Original Charge to the Subcommittee

Superfund Subcommittee National Advisory Council for Environmental Policy and Technology

Draft Charge

BACKGROUND:

In July 2001, the Deputy Administrator directed the development of an action plan to address the recommendations in the Resources for the Future (RFF) report to Congress, *Superfund's Future, What Will It Cost?* Specifically, the plan called for the creation of a Superfund Subcommittee under the auspices of the Agency's National Advisory Council for Environmental Policy and Technology (NACEPT).

In the fall of 2001, the Agency enlarged the Superfund Subcommittee's scope to reflect consideration of the Superfund program in context with other federal and state waste cleanup programs. This broader focus will consider how the Nation's waste programs can work together in a more effective and unified fashion, so that citizens can be assured that federal, state, tribal and local governments are working optimally to make sites safe for their intended uses.

STATEMENT OF TASK:

The overall intent of this effort is to assist in identifying the future direction of the Superfund program in the context of other federal and state waste and site cleanup programs. Specifically, the Superfund Subcommittee will review the relevant documentation and, to the extent possible, provide answers to the questions that are attached and that relate to: a) the role of the NPL, b) mega sites, and c) measuring program performance.

During the period of Subcommittee activity, additional issues may arise for which the Agency will seek Subcommittee input. If this occurs, EPA will identify specific issues or questions for which advice is sought and provide appropriate documentation.

LEVEL OF EFFORT:

1. The Agency shall furnish the necessary personnel, material, reports, background documents and facilities needed for the Subcommittee activities.
2. It is expected that the Subcommittee activities will be accomplished by a series of meetings over about an 18 month period.
3. It is anticipated that one or a series of consensus reports will result. However, where consensus cannot be reached, a written discussion of the different opinions of Subcommittee members is to be provided.

4. The scope of the Subcommittee, as identified in the Statement of Task, will not change without agreement of both the Subcommittee and the Agency.
5. For additional issues for which the Agency will seek Subcommittee input, it is understood that these issues would not replace the main focus of the Subcommittee as identified in the Statement of Task. For these additional issues, the Subcommittee response may be in the form of a “consultation,” i.e., dialogue, rather than a formal written report.
6. The Subcommittee may, at its discretion, make use of separate working groups to address specific issues. The Agency will support the activities of these working groups in the same manner as will be provided for the Subcommittee itself.
7. The Subcommittee will operate as and be subject to the requirements of a FACA Committee.

Role of the NPL:

The process to place sites on the NPL has become increasingly contentious since the Superfund program’s inception. Some stakeholders support the notion that the NPL is most appropriately a “tool of last resort.” Others believe the current process inappropriately emphasizes keeping sites off the list. Perceptions aside, sites placed on the NPL are typically those with either recalcitrant or no potentially responsible parties (PRPs), those where States lack funds to perform cleanup, those considered Federal facilities, or where tribal, trustee, or affected community pressure is applied. Other cleanup avenues include the Resource Conservation and Recovery Act (RCRA) program, the relatively new Brownfields program, Federal agency response programs, Leaking Underground Storage Tank Program, State deferral or voluntary cleanup programs, and EPA’s use of so-called “NPL-equivalent” cleanups and large-scale removals.

1. What should be the role of the NPL in addressing waste cleanup given other cleanup options? Should it be a “tool of last resort?” In particular, what is the appropriate role of non-NPL cleanups and States in addressing sites?
2. What parties (e.g., states, tribes, and communities) should have formal consultation roles in NPL listing? Should this role differ by site type or risk?
3. What kinds of sites belong on the NPL? Should the NPL be used for a more limited range of sites (for example, only sites where human health is at risk, not ecological risk)? If so, how might other major risks be addressed?

Mega Sites:

The RFF Superfund cost study defined mega sites to be those NPL sites where cleanup costs (i.e., total removal and remedial action costs) exceed \$50 million. Mining and contaminated sediment sites are often considered synonymous with mega sites, although the majority of mining and sediment sites are not mega sites, and vice versa. RFF indicated that cleanup costs for mega sites are among the major variables driving future program costs. Mega site cleanups, especially those tied to mining and contaminated sediments, are also often difficult and time consuming.

1. Should cost be the determinant when designating sites to be mega or should other factors such as complexity or geographic size be considered?
2. Are there viable alternatives to placing mega sites on the NPL and/or ways of containing their costs (for example, listing only the highest priority portions of the sites)?
3. What are the feasible and reasonable policy options for addressing mega sites?
4. Should mega sites have a unique decision process for NPL listing? If so, what supplemental processes are suggested?

Measuring Program Progress:

For approximately the last seven years of the Superfund program, construction completion has been the program's key measure of progress for sites on the NPL. However, this milestone only reflects the final outcome of years of analysis, cleanup work, and effort at NPL sites. Construction completion neither measures nor characterizes the impacts of cleanup efforts on human health and the environment. Furthermore, construction completions do not correlate as milestones for non-NPL cleanups or with efforts at other hazardous waste cleanups. In the past few years, the Resource Conservation and Recovery Act (RCRA) program developed indicators to gauge the impact of its efforts on human health and the environment. The Superfund program has capitalized on RCRA's efforts and conceptualized similar indicators for Superfund work. Nonetheless, there still are few cross-program metrics to capture comprehensive outcomes for interim work. This void impedes the Agency's ability to communicate work at hazardous waste sites to the public, Congress, States, and the regulated community.

For this particular issue, EPA is not posing specific questions to the Subcommittee. Rather, the Agency expects to share new measure proposals with the panel and will seek feedback from the Subcommittee on those proposed measures.

Appendix III:

**Memo from Elliott P. Laws Concerning Remedial Action
Priority Setting**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JAN 19 1996

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

MEMORANDUM

SUBJECT: Remedial Action Priority Setting

FROM: Elliott P. Laws *[Signature]*
Assistant Administrator

TO: Regional Administrators
Regions I-X

Thank you for your participation in our conference call on January 16, 1996 regarding the impact of potential budget cuts on the Superfund program. I asked my staff to prepare the three enclosed attachments in response to our discussions, and request that you provide any comments on them to Steve Luftig, Director of OERR by February 2, 1996.

The first attachment is a summary of Congressional action on our FY 1996 Superfund appropriation. Under any scenario proposed so far, the Superfund program will face severe reductions from the 1995 Operating and 1996 President's Budget resource levels. OSWER is currently using the following principles for our FY 1996 resource planning:

- o Emergency removals will be funded at 1995 levels to the extent possible.
- o Core Cooperative Agreements and the Brownfields initiative should be maintained at the 1995 level
- o A very limited number of front-end pipeline activities will be funded.
- o Fund-lead remedial actions will absorb a significant cut.

-2-

The second attachment is a summary of what I believe to be a sound policy course with regard to managing the Superfund program in light of weighing our discussions with Agency commitments and existing policy. In this context, we need to be aware of the continued Agency commitment to national risk-based priority setting and the success we are demonstrating by completing construction at NPL sites.

The third attachment is a detailed summary of practices we will employ for priority setting on a national basis with regard to funding new Superfund cleanup projects while keeping in mind our discussions regarding the need to support ongoing projects. I trust we will continue to work together through these challenging circumstances. Please call on me if you have any questions, and continue to call on Steve Luftig for support in addressing Superfund issues as they arise.

Attachment

Attachment 1**FY 1996 Superfund Budget Summary**

The accompanying chart depicts Congressional action to-date on the Agency's FY 1996 Superfund Appropriation. The chart shows five major budget functions for the Superfund program: Response, Enforcement, Research and Development, Management and Support, and Other Federal Agencies. It is important to remember that the resources shown for the five budget functions are the result of Congressional report language, not Bill language. Therefore, while the Agency may at some point receive a total Superfund appropriation, any additional details shown in Congressional report language accompanying our appropriation may be changed, subject to Congressional approval.

The chart is intended for informational purposes only. The function subtotals are subject to change resulting from Congressional or Agency decisions.

Note: FY 1995 column equals enacted Operating Plan less \$100 million rescission.

1/19/96

Superfund

FY 1996 Superfund Congressional Action
(Dollars in Millions)

Category	FY 1995 Enacted Op Plan	FY 1996 President's Request	FY 1996 House Level	FY 1996 Senate Level	FY 1996 November Conference
Response	\$805.11	\$995.95	\$649.61	\$631.29	\$803.46
Response Action	\$801.69	\$992.53	\$646.53	\$627.87	\$800.38
Response Support - OAR	\$3.42	\$3.42	\$3.08	\$3.42	\$3.08
Enforcement	\$169.71	\$192.74	\$77.74	\$127.74	\$127.00
Research and Development	\$61.25	\$58.22	\$13.22	\$18.22	\$0.00
Management and Support	\$126.62	\$150.23	\$115.73	\$97.85	\$122.00
Management and Support	\$111.22	\$136.15	\$110.73	\$86.15	\$111.00
Inspector General Transfer	\$15.40	\$14.08	\$5.00	\$11.70	\$11.00
Other Federal Agencies	\$168.50	\$165.79	\$147.10	\$125.79	\$140.95
ATSDR	\$68.80	\$68.00	\$62.00	\$54.00	\$59.00
NIEHS	\$58.70	\$54.53	\$49.50	\$34.53	\$48.50
DOJ	\$32.20	\$33.94	\$27.16	\$27.94	\$25.00
USCG	\$4.80	\$4.80	\$4.35	\$4.80	\$4.35
NOAA	\$2.20	\$2.21	\$2.00	\$2.21	\$2.00
FEMA	\$0.90	\$1.20	\$1.10	\$1.20	\$1.10
DOI	\$0.60	\$0.76	\$0.68	\$0.76	\$0.68
OSHA	\$0.30	\$0.35	\$0.32	\$0.35	\$0.32
Gulf Coast Haz Sub Res Ctr				\$2.50	\$0.00
General Reduction					(\$30.00)
Appropriation Total	\$1,331.20	\$1,562.94	\$1,003.40	\$1,003.40	\$1,163.40

ATTACHMENT 2

DRAFT PRIORITY SETTING POLICY SUMMARY

Criteria for Defining Existing Cleanup Work:

- In general existing work should be given priority over new work.
- Completion of construction activities at NPL sites continues to be a high priority for the Agency.

Existing or ongoing cleanup work at a site, in contrast to new work at that same site, is not of a separable and discrete nature. Work considered as existing or ongoing is exempt from national ranking by the National Risk-Based Priority Panel, and in general exhibits one of the following characteristics:

- The work consists of existing continuous operations conducted under a single construction contract mechanism.
- The work supports a Long Term Response Action (LTRA) for example, a ground-water pump and treat remedy.
- Discontinuing the work would result in imminent endangerment of human health or the environment.
- The cost of the work element is relatively low, for example, less than \$100,000 and is integral to the overall cleanup of the site.

In addition, Regions have identified several EPA/PRP mixed funding and mixed work projects which may require funding in FY 96. These projects will be considered separately for funding.

Criteria for Defining New Cleanup Work:

- New, Fund-financed cleanup work is subject to priority ranking by the National Risk-Based Priority Panel, with the exception of "emergency" and "time critical" response actions.
- All new cleanup work is funded in sequence of national ranking, unless the Assistant Administrator of OSWER grants an exception.
- Determinations on whether a project represents new or existing work will be made by the National Risk-Based Priority Panel.

New cleanup work consists of large removal actions which exceed funding levels available within a Region's baseline removal budget, as well as cleanup activities at sites where no previous actions have taken place. In addition, activities at sites are considered new work if they constitute "separarable and discrete" elements of existing site activities.

Separable and discrete implies an element of work associated with the overall cleanup of a site that may be considered on an independent pathway with regard to timing and implementation. The National Risk-Based Priority Panel is scheduled to meet on January 30 & 31, 1996, in Crystal City, Virginia to complete the ranking of new work scheduled to begin in FY 96.

Criteria for Cessation of Work at Ongoing Projects:

- o There may be situations where work can be discontinued and the recovered funds used to support other national priority projects. These actions require prior consultation with Headquarters.

As noted, maintaining our ongoing projects remains a top priority. This is particularly true for ongoing remedial action projects. These projects are intended to mitigate an identified risk and we should follow through on our commitments to the States/Tribes and the communities to complete this work.

Also, it can be very costly to terminate a construction project under a fixed price contract, with specific costs incurred for securing the site and demobilization, as well as claims for costs already incurred by the contractor (e.g. long lead time equipment), other costs incurred in shut-down, and potential impact claims for lost profits. Additional costs could be incurred later if the project is restarted. These facts weigh heavily against stopping projects through contract terminations.

However, situations may occur where stopping a project or work at a site should be considered as a viable option.

Criteria:

- Changed field conditions at a site have been identified and will result in a substantial cost increase to implement the remedy as defined in the ROD calling into question the rationale for the remedy selection decision.
- Evidence has been uncovered which demonstrates that maintaining an ongoing long term remediation effort (e.g. ground water pump/treat, soil vapor extraction, bioremediation) will not result in a significant

additional reduction in residual waste concentration or risk.

- Consultation with the State or PRP group indicates that another party is prepared to take over the work.

Regional proposals to terminate ongoing projects will require consultation with OERR prior to initiating the action. Also, the Region must coordinate closely with the affected State/Tribe, and involve the community in the decision process.

Funds recovered from stopping work at an ongoing project must go through the deobligation process and be recertified by the Comptroller back to the national Superfund program. These funds will be used to start new projects based on the national risk-based priorities.

Criteria for Reopening RODs:

- Records of Decision should not be reopened to select cheaper remedies simply based on diminished availability of Federal remedial action funds.
- Under the Superfund reforms, EPA has committed to evaluating earlier decisions where new scientific information or technological advancements indicate that another remedial strategy would be more effective or appropriate for the site (while maintaining protectiveness). The principal focus of this effort is to reassess older ground-water decisions which did not consider the potential presence of dense nonaqueous phase liquids (DNAPLs) or may benefit substantially from newly available remediation technologies.
- Records of Decision may be modified whenever significant new information persuades EPA that the selected remedy is no longer the most appropriate solution for the site. Procedures for making such modifications are outlined in CERCLA section 117(c) and (d), the NCP, and the ROD guidance.

A selected remedy represents EPA's judgment as to the most appropriate solution for a Superfund site -- that protective ARAR-compliant option which achieves the best balance of tradeoffs between remedial alternatives with respect to the remedy selection criteria, including cost.

Remedies are selected for individual sites such that they satisfy the requirements of CERCLA and the NCP, without consideration of who will pay for the cleanup or their financial capability. Therefore, variations in available Federal funding should have no

bearing on our judgments regarding whether the remedy is the most appropriate solution for a site, although other information may.

Deobligated Funds:

- o Use of deobligated funds is subject to all established provisions of national Superfund program funding criteria.

The Office of the Comptroller has been leading the 1994 and 1995 deobligation effort. Historically we have tried to assure Regions would receive a portion of the funds they deobligate for reprogramming in the Region of origin. As a result of the budget situation in 1996 we will need to establish procedures and guidelines for deobligations during this fiscal year. Any reprogramming of funds would still be subject to the national priority setting scheme.

Additionally, the processing of Superfund State Contract funds will be a higher priority than the deobligation of other funds

**Attachment 3
National Risk-Based Priority Panel**

In response to funding shortfalls and an agreement between Superfund Senior Managers and Congress, a change from a regional prioritization system to a national prioritization system was implemented in Fiscal Year 1995 for all large dollar removals and new start remedial action projects where funding was requested during Fiscal Year 1996. This system involves employment of a ranking scheme that prioritizes projects based on the following principles:

- * Protection of human health
- * Protection from significant environmental threats
- * Potential human health or environmental threats based upon current site conditions.

Five criteria and associated weighting factors (below) are used to classify threats that contaminants may pose. These include risks to human population exposed, contaminant stability, contaminant characteristics, threat to a significant environment and program management considerations. Each criteria is ranked on a scale of one to five. The highest score for any criteria is five representing a current risk-current exposure scenario posing risk to human health and the environment. The lowest score for a factor is one representing a future risk-future exposure scenario.

A national prioritization panel comprised of national program experts from Regional offices and Headquarters ranks projects. The panel met for the first time in August 1995 to finalize the protocol for ranking projects on a national level and to begin voting on projects that were ready for funding during Fiscal Year 1996.

The Superfund program in the 1990s has shifted from a program with the largest percentage of projects in a study phase to a program in which the largest percentage of sites have at least started remedial design. A national priority list is seen as a way for each Region to list its priority projects in order of importance and rank these projects against priority projects from other Regions ensuring that scarce resources are allocated to the projects posing the most risk to human health and the environment.

Criteria Factors and Weights

<u>Weight</u>	<u>Factors</u>
5	A. Risks to Human Population Exposed: Population size, proximity to contaminants, likelihood of exposure.
5	B. Stability: Mobility of Contaminant, Site Structure and Effectiveness of any Institutional or Physical Controls.
3	C. Contaminant Characteristics: Concentration, Toxicity and Volume.
3	D. Threat to a Significant Environment: Endangered Species or their Critical Habitats, Sensitive Environmental Areas.
4	E. Program Management Considerations: Innovative Technologies, Cost Delays, High Profile Projects, Environmental Justice, State Involvement, Brownfields/Economic Redevelopment.

The raw score for each factor is multiplied as follows to obtain the maximum score.

			Raw Score	Weight Factor	Total Score
Factor A	Population Exposed	1 - 5	x	5	= 25
Factor B	Stability	1 - 5	x	5	= 25
Factor C	Contaminant Char	1 - 5	x	3	= 15
Factor D	Threat to a Significant Environment	1 - 5	x	3	= 15
Factor E	Program Management Considerations.	1 - 5	x	4	= 20
Total				=	100

Appendix IV:

**Memo from Henry L. Longest II Concerning Guidance on
Setting Priorities for NPL Candidate Sites**

Kenyon LaSalle



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D.C. 20460

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

OSWER Directive 9203.1-06

MEMORANDUM

SUBJECT: Guidance on Setting Priorities for NPL Candidate sites

FROM: Henry L. Longest II, Director
Office of Emergency and Remedial ResponseTO: Director, Waste Management Division
Regions I, IV, V, VII
Director, Emergency and Remedial Response Division
Region II.
Director, Hazardous Waste Management Division
Regions III, VI, VIII, IX
Director, Hazardous Waste Division
Region X
Director, Environmental Services Division
Regions I, VI, VIIPURPOSE

The purpose of this directive is to transmit interim final guidance on "Setting Priorities for NPL Candidate Sites" for use in Superfund site assessment.

BACKGROUND

Many of the regions have substantial backlogs of sites for which site inspections (SIs) have been completed. Each of these sites needs additional staff work to support a decision to list the site on the NPL or to refer the site to the State or other authorities for appropriate action.

OBJECTIVE

All participants in the Superfund program should set priorities for National Priorities List (NPL) candidate sites in a consistent manner. Proper use of the guidance will help to achieve this goal. The Superfund Accelerated Cleanup Model Regional Decision Team (SACM RDT) can help set priorities and ensure technical quality.

IMPLEMENTATION

Superfund site assessment personnel should immediately begin incorporating this priority-setting guidance into ongoing operations.

If you need further information on priority setting, contact the Hazardous Site Evaluation Division, Barbara Vandermer at FTS 703-603-8812 or David Ouderkirk at FTS 703-603-8721.

Attachment

SETTING PRIORITIES FOR NPL CANDIDATE SITES

PURPOSE

This guidance document identifies factors that will help EPA regions decide the order in which they should consider sites with completed site inspections (SIs) for inclusion on the National Priorities List (NPL) pursuant to section 105(a)(8)(B) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). Stressing risk-based decisionmaking, this guidance should be used as a tool to increase the consistency of the process for setting priorities, conserve program resources, and advance Superfund's worst-sites-first policy. Regions should use the factors in this directive to determine which sites receive the most expedited consideration for early action or NPL listing, not to remove sites from further consideration altogether.

This directive is intended to be used on sites with newly completed SIs and older sites for which no decision on priority has been made. The guidance does not recommend that regions reconsider earlier priority determinations on sites in their backlogs, although they may choose to do so.

The procedures set forth in this document are intended as guidance to employees of EPA, States, and other government agencies. EPA officials may decide whether or not to follow the guidance based on analysis of specific site circumstances. EPA may modify this guidance at any time without public notice. This guidance does not constitute EPA rulemaking and cannot be relied on to create any rights enforceable by any party in litigation with the United States.

BACKGROUND

Many of the regions have substantial backlogs of sites for which SIs have been completed. Each of these sites needs additional staff work to support a decision to list the site on the NPL or to refer the site to the State, CERCLA early-action authorities, or other authorities as appropriate.

GUIDELINES FOR SETTING PRIORITIES

Each region should use the following two-step process to establish the relative priority of sites. The process is designed to make site priority evaluations quick and simple; decisions should require no more information than is routinely included in site inspection reports. To avoid duplicative efforts, site priority decisions should not be reassessed unless significant new information becomes available.

Step 1: Consider General Factors

For each site assigned a projected Hazard Ranking System (HRS) score at or above 28.5, regions should consider the general factors discussed below. However, these factors do not constitute an exhaustive list; regions have the flexibility to consider additional factors they deem appropriate.

Hazard Ranking System Score. The projected HRS score may provide one measure of a site's risk in evaluating sites under the HRS, regions should ordinarily project the score based on evaluating each site's most significant pathways. Once a projected HRS score (developed from the SI worksheet or PREscore) at or above 28.5 is determined, regions should consider whether there are risks not reflected in the projected score.

Environmental Factors. Although most of the following factors will have been considered when determining the projected HRS score, they should also be evaluated qualitatively for both scored and unscored pathways to the extent that appropriate data are available in the SI report. Regional staff should evaluate any unscored pathways subjectively by using their best professional judgement.

- Has an observed release been documented? Has Level 1 (exposure to humans or sensitive environments above a health-based or ecological benchmark) or 2 (exposure below benchmarks) contamination been documented? Has the site caused the closure of a drinking water supply?
- How far is the target population from the site sources? Is the population potentially or actually exposed under current land use conditions (both onsite and offsite)? What is the likelihood that exposure has occurred?
- Has the Agency for Toxic Substances and Disease Registry (ATSDR) issued a health advisory? Is it planning to?
- What are the risks associated with contaminants found in air, soil, ground water, and surface water? Are the hazardous substances, pollutants, or contaminants at the site highly toxic? Are large quantities of these substances present?
- What is the effect of any removal/remedial work at the site? Are conditions deteriorating? Is contamination spreading? What effect will the delay of any remedial action have at the site?

- Are hazardous substances, pollutants, or contaminants at the site mobile? If so, how mobile? Are any containment features in place to mitigate risks? If so, how effective are they? Are these substances likely to be released in the future?
- Are any nearby sensitive environments or endangered species threatened? How fragile or how important is the sensitive environment? How far is it from the site sources? Are major impacts likely?

CERCLA Removal Actions. Are EPA removal actions complete, underway, or scheduled? Will proposed or ongoing EPA removal actions significantly reduce risks?

Other Regulatory Involvement. Is the site being addressed by some other authority?

- Is there active State or non-CERCLA Federal response action complete, ongoing, or scheduled at the site? Will all pathways of concern be evaluated? Are resources adequate to address the site?
- Is the site subject to regulation pursuant to subtitle C of the Resource Conservation and Recovery Act (RCRA)? If the RCRA deferral policy is applicable, the site should not receive further consideration for placement on the NPL. If RCRA deferral is not appropriate, any complete, ongoing, or scheduled response action taken under RCRA should be considered in priority setting.
- Are other regulatory agencies, such as local and county health departments, undertaking response action at the site? Can they provide adequate oversight? Is such action likely to continue?

PRP Response Actions. Has the potentially responsible party (PRP) completed, scheduled, or undertaken response action at the site? Is such action likely to continue?

Degree of Public Concern. Has the State recommended this site for the NPL pursuant to CERCLA 105(a)(8)(B)? Is there community interest in the site? Are community groups aware of plans for characterization/remediation, and do they approve? Is there congressional interest?

Step 2: Designate Priorities

After evaluating the general factors listed above, each region should divide its candidate NPL sites into high or low priority. Particular factors should be considered in making this determination:

- High priority generally should be given to any site:
 - where people are currently exposed to hazardous substances, pollutants, or contaminants;
 - where actual contamination has been documented, especially at or above a health-based benchmark;
 - where a large potentially affected target population is nearby;
 - where contamination to a sensitive environment or fishery has been documented;
 - where the State has recommended the site be listed on the NPL pursuant to CERCLA 105(a)(8)(B); or
 - where the ATSDR has issued a health advisory or is planning to.

However, in considering the totality of circumstances consistent with the worst-sites-first policy, regions may determine that a particular site may not merit high priority. Such a situation might occur when significant response actions are being undertaken at a site by the State, other governmental authority, or a PRP.

Low priority generally should be given to all sites not exhibiting any of the above factors. Once again, however, after viewing the totality of factors present, regions may conclude that a given site having none of these factors should nonetheless be assigned high priority.

Within each category, priorities should be set consistent with EPA's worst-sites-first policy. This guidance does not present specific factors for determining which of several sites should be addressed first within each category. Guidance may be provided in the future if appropriate.

PEER REVIEW PROCESS

To help set priorities as well as to ensure technical quality, the Superfund Accelerated Cleanup Model (SACM) Regional Decision Team (RDT) may opt to use some form of peer review process. Peer reviews can be an important step in ensuring technical accuracy and promoting consistency. In addition to site assessment staff, the peer review group could include program management staff, remedial project managers, on-scene coordinators, technical staff (e.g., chemist, hydrogeologist toxicologist), and possibly representatives of non-Superfund EPA.

programs such as air, water, and toxic substances. Regions may tailor these suggestions to their own needs or choose not to implement peer review.

DOCUMENTATION

Regions should informally document the factors which determined each site's priority. This record should not be made public. The Freedom of Information Act (FOIA) exempts from mandatory release preliminary documents reflecting the Agency's deliberative processes [5 USC 552(b)(5)].

Appendix V:

Performance Profile

Superfund Site Report Card Mock Up

General Background		National Average	Year Group Comparison (1988-1992)	Site Report Card Points
Region	1			
State	MA			
EPA ID	MAD001026319			
Site Name	ATLAS TACK CORP.			
NPL Status	F			
Federal Facility	N			
Population 1 Mile	5,000 - 10,000 (6,688)	5,000 - 10,000 (8,025)	5,000 - 10,000 (8,833)	
Population 4 Miles	100,000 - 150,000 (114,601)	75,000 - 100,000 (77,226)	75,000 - 100,000 (74,399)	
Media Contaminated	Soil, Groundwater, Surface Water, Sediments			
Primary Contaminants	Too numerous to list			
Administrative				
Date of Site Assessment				
Date of Proposal to NPL	06/24/1988			
Date Final on NPL	02/21/1990			
Date Construction Complete				
Date Deleted from NPL				
How Long on NPL (NPL Listing to date, CC, or deletion)				
	13.0 years	12.2 years		
"Year Class" Comparison	70% of sites listed concurrently or prior to Atlas Tack are construction complete		60% of sites are construction complete	
Major Cleanup Milestones				
Final ROD at Site	Y	74% have final ROD	76% have final ROD	10
Human Exposure Under Control	Y	80% are under control	84% are under control	10
Contaminated Groundwater Migration Under Control	N	61% are under control	68% are under control	0
Construction Complete	N	54% are CC	60% are CC	0
Cleanup Progress				
RIFS Status	RIFS All OU Complete	69% have All RIFS Complete	3.7	4
ROD Status	ROD All Complete	74% have All RODs Complete	2.7	3
RD Status	RD 1 or More OU Underway	15% have 1 or More RD Underway	3.3	2
RA Status	RA No OU Underway	29% have no RAs Underway	3.2	1
LR Status	or More Planned Not Underway			
Removal at Site	Y			
ROD at Site	Y			
Status of "Leading" OU	Design Underway			
Durations of Current Cleanup Activities				
Longest RIFS Ongoing Duration	N/A			
Longest RD Ongoing Duration	N/A			
Longest RA Ongoing Duration	N/A			
Date of Last Completed Cleanup Action	Remedial Design 07/23/02			
Construction Completion Status				
CC Site RIFS Planned or Underway	N/A			
CC Site RD Planned or Underway	N/A			
CC Site RA Planned or Underway	N/A			
CC Site LR Planned or Underway	N/A			
CC Site Five Year Review Completed	N/A			
Scope of Contaminated and Cleanup Progress				
RME Cancer Risk	5 x 10 ⁻³ (PAHs, PCBs, Arsenic)			
Non-Cancer Hazard Index	<1			
Known Area of Contamination	54,000 cubic yards			
% Where Cleanup Goals are Met				
% With Residual Contamination				
Selected Remedy - Treatment Component	6,000 cubic yards			
Selected Remedy - Containment Component	48,000 cubic yards			
Estimated Volume of Contaminated Material				
% of Estimated Volume Addressed				
Institutional Controls In Place				
Institutional Controls Not Required				
Institutional Controls Required But Not In Place				
Five Year Review Protective	N/A			
Total Report Card Points		37.5	41	30

Appendix VI:

Additional Elements of Comprehensive Reporting

Appendix VI

Additional Elements of Comprehensive Reporting

As was stated in Chapter V of the body of the report, the Agency has flexibility in terms of the reporting format used for measures of progress and performance. The Subcommittee recommends that the Agency track additional measures (for which data currently exist) and, in the future, add additional measures for which data does not currently exist but can reasonably be obtained. Consensus did not exist regarding which additional items should be tracked. Many suggestions were offered by individual members as data that could increase the effectiveness of the Performance Profiles or provide valuable information for other purposes. The group felt it was important to move the ideas forward as an Appendix in an effort to provide more comprehensive feedback to the Agency. By not including this level of detail, the richness of the discussion would be lost. The following items were discussed as data that could be helpful to track in order to more comprehensively understand the progress of the Program. They do not reflect consensus among members, rather they are ideas put forth by individual Subcommittee members to which other members may object.

- ➔ Human exposure under control (from land and/or groundwater contamination)
- ➔ Contaminated groundwater migration under control
- ➔ Site cost information [total cost to-date and projected total (EPA data on past costs and projections of future costs if this is determined to be available for a sufficient number of sites to make reporting reliable). For example, cost spent on RA. Cost spent to get to construction complete and RA costs as a percentage of total costs)
- ➔ Community involvement indicator (Existence of a TAG - Y/N, Existence of a CAG - Y/N)
- ➔ Total number of Operable Units
- ➔ Number of sites where all cleanup goals have been achieved (Some Subcommittee members understood this number to be slightly different than “sites deleted from the NPL” and felt it would be useful to track both – with an explanation of the difference.)
- ➔ Performance Profile (report card) score from previous year
- ➔ Site cleanup lead (fund, PRP, mixed)
- ➔ Number, description and effectiveness of institutional controls and long-term stewardship efforts (this information could be used to indicate the percentage of ROD’s requiring institutional controls at a national level)
- ➔ Sites that reached construction complete but have been reopened (with an explanation of the reason why the remedy has been reconsidered. For example, improved technology has become available or the remedy failed)
- ➔ Acre feet (or gallons) of restored water (specify amount restored for drinking water vs. cleaned up to pose no unacceptable risk to ecological receptors, or cleaned up for restricted use)

- ➔ Acres of land returned to beneficial use (specify amount cleaned up for restricted vs. unrestricted use and acres cleaned up to pose no unacceptable risk to ecological receptors)
- ➔ Acres of sediment restored for beneficial use (restricted versus unrestricted and acres safe for ecological receptors)
- ➔ Contaminants of concern at each site by medium
- ➔ Number of sites (specifically NPL sites) completing each major step in the Superfund process: remedial investigations completed, feasibility studies completed, ROD's issued, remedial designs completed, constructions completed, five year reviews completed and sites deleted from the NPL.
- ➔ Sensitive Environments Protected (This was address in the context of the national priority measures. The Agency has not yet proposed a measure for sensitive environments. The Subcommittee recognizes that it is complex and difficult, that it is important, and that when a measure is developed it should be thoroughly reviewed by stakeholders before implementation.)
- ➔ Consistent site type definitions (i.e. SIC codes)
- ➔ Current land use (private/commercial)
- ➔ Exposure pathways (e.g. consumption, ingestion,, subsistence fishing, etc.)
- ➔ Cooperation at site with other cleanup programs
- ➔ Risk Reduction Measures
- ➔ Remedy effectiveness measures
- ➔ The Hazard Ranking Score for the Site
- ➔ The date EPA expects construction to be complete
- ➔ Implementation of administrative reforms (e.g. orphan share funding, groundwater strategy, special account, land use, remedy review board, revisit remedies to update approach)
- ➔ PRP costs
- ➔ Human Health risks
- ➔ Ecological risks
- ➔ Remedy failure - In addition to the 5-year review data that is currently included in the Performance Profile, additional data should be collected to report on the effectiveness of remedies relative to state and national cleanup standards and community expectations.
- ➔ Acres of land covered by operable units at a site
- ➔ Demographics information (race, ethnicity, income, etc.)
- ➔ Number of removal actions and population protected
- ➔ Acres of land (now) available for industrial or other reuse and acres predicted to be available.
- ➔ Economic, recreational or environmental benefits derived from reuse.
- ➔ Number of sites or operable units at which risk based cleanup goals have been attained
- ➔ Use of resources from or cooperation with other cleanup programs
- ➔ Use of contract reforms

The Subcommittee recognizes that in some cases, EPA currently does not have the data to track all of these measures or they do not have consistent data to do so accurately.

The Subcommittee suggests that EPA consider developing the capacity to collect and track these data so that they can be reported accurately at the site and national level in the future.

Many members oppose certain items included on the list. In particular, a range of perspectives on the Subcommittee felt that the RCRA measures were inappropriate to include for Superfund. While it may be appropriate for the RCRA program to use “groundwater contamination under control” as a national measure of performance [since all other chemical releases (air emissions, discharges to surface water, etc.) are tightly controlled at the RCRA facilities] Some Subcommittee members believe that this is not a good measure of performance for all Superfund sites, many of which were created and abandoned before RCRA was enacted. Superfund sites typically suffer from uncontrolled releases into the air, surface water, sediments and soil, as well as groundwater. Therefore, if the performance of EPA staff is measured by whether they have controlled groundwater (but not other types of) contamination at a site, the fear is that will have the undesirable effect of driving EPA to place its top priority on controlling groundwater contamination at sites first, even if other problems are more urgent. These members believe that a more balanced national measure would ask whether contamination from a list of relevant sources (air, soil, surface water and groundwater) is under control at a site, meaning that it is not spreading. This would allow EPA to set the right priorities, seeking to control the most pressing types of contamination first, and getting credit for achieving such control.

Additionally, some members believe that stopping contamination from spreading, while generally beneficial, is not a good indicator of cleanup progress.¹ These Subcommittee members believe the RCRA measures are inappropriate because they might prioritize and reward the use of containment and institutional controls, rather than permanent treatment, and because they may be difficult to objectively verify.

Some members of the Subcommittee believe that some of these measures (particularly health risk related) are very controversial and may need outside expertise to develop if they are to be reliable. Some members felt that the critical factor in measuring program progress is reduction of risk to human health and the environment at NPL sites. They felt that it was vitally important for the agency to monitor and calibrate risk reduction using risk assessment techniques as the basis for such a measure. Where human exposures are under control, communities and the public should know this fact. Other members also believe that risk reduction measures would be difficult if not impossible to develop in an objective way that accurately reflects the progress of the program. Furthermore, critics of risk reduction measures argued that such measures have the potential to trigger unintended consequences that outweigh the benefits. The Work Group on Measuring Program Performance devoted considerable time and effort in attempting to develop meaningful, transparent, clear and simple measures that would not require significant additional expenditures to gather and collate data. However, the group was unable to

¹ Subcommittee member Richard Stewart believes that these RCRA measures are appropriate measures of performance in reducing risks at sites, pending development of more truly risk based measures. See Attachment I for his individual statement.

satisfy these goals. This is largely due to the difficulty in defining the population at risk. EPA identifies exposure pathways and potential receptors. However, once unacceptable exposures are identified, EPA does not expend resources trying to quantify the actual numbers of receptors, and the exact risk to which they are exposed. Nor can the agency capture averted risks to future populations because it cannot predict how adjacent areas will be developed.

Similar to the statement made with respect to national priority measures in the main body of the report, some members believe that mega sites may need to be distinguished from other sites covered by the performance profiles in order to reflect the expectation that progress on such sites will likely take longer.

Appendix VII:

Community Satisfaction Survey

What Do You Think About EPA's Community Involvement Efforts at the _____ Site?

The U.S. Environmental Protection Agency (EPA) is cleaning up the toxic wastes at the _____ Superfund site in your community. EPA believes the active, meaningful involvement of community members is critical to the success of a cleanup effort. This survey is an opportunity for you to tell us how well we are doing at listening to your concerns about the cleanup and making it possible for you to participate in the planning and decision making process. Please take a few minutes to answer the questions. Your views are important and will help us to be more responsive to your needs and interests.

This survey is being conducted in accordance with the Federal Paperwork Reduction Act Information Collection Request # 1463.05. You will need about 15 minutes to answer the questions.

Directions:

- Do NOT put your name, address, or phone number on this form.
- Please use the postage paid envelope provided to return this form to our contractors.
- Do NOT put your return address on the envelope.

1. How do you rate EPA at each of the following? (Circle one number for each question)

	Very Bad					Very Good	
a. Providing the information you need	1	2	3	4	5	6	
b. Giving you accurate information	1	2	3	4	5	6	
c. Making the information easy to understand	1	2	3	4	5	6	
d. Earning your trust	1	2	3	4	5	6	
e. Making it easy to get involved	1	2	3	4	5	6	
f. Understanding your concerns	1	2	3	4	5	6	
g. Responding to your concerns	1	2	3	4	5	6	
h. Treating you courteously	1	2	3	4	5	6	
i. Having a fair decision making process	1	2	3	4	5	6	
j. Using your input	1	2	3	4	5	6	
k. Explaining decisions	1	2	3	4	5	6	
l. Cleaning up the site	1	2	3	4	5	6	

2. Before cleanup of the site began, how concerned were you about the site being harmful to each of the following? (Circle one number for each question)

	Not Concerned			Very Concerned		
a. My family's health	1	2	3	4	5	6
b. The environment	1	2	3	4	5	6
c. Property values	1	2	3	4	5	6
d. Jobs in the community	1	2	3	4	5	6
e. Business in the community	1	2	3	4	5	6

3. How concerned are you about the site being harmful to each of the following once the cleanup work is finished? (Circle one number for each question)

	Not Concerned			Very Concerned		
a. My family's health	1	2	3	4	5	6
b. The environment	1	2	3	4	5	6
c. Property values	1	2	3	4	5	6
d. Jobs in the community	1	2	3	4	5	6
e. Business in the community	1	2	3	4	5	6

4. How have you have learned about EPA's work at the site? (Check all that apply)

- ☐ EPA mailings (other than this survey)
- ☐ Newspaper articles
- ☐ Radio or TV news
- ☐ Community member
- ☐ Family or friends
- ☐ EPA's web page
- ☐ Public meeting or information session held by EPA
- ☐ Direct conversation with someone from EPA
- ☐ Information about the site is "common knowledge"
- ☐ Know someone who worked at the site
- ☐ Participation on one or more citizen groups

5. How would you prefer to receive site information? (Check the ONE you most prefer)

- ☐ Monthly "News Brief": project updates, contacts, calender of events, and new documents
- ☐ Short (1-2 pages), very focused (issue-specific) mailings, sent frequently
- ☐ Longer, general informational mailings, sent periodically
- ☐ Newspaper articles
- ☐ Radio or TV news
- ☐ A knowledgeable person in your community
- ☐ The EPA web site
- ☐ Short, very focused meetings, held frequently
- ☐ Longer, general informational meetings, held periodically
- ☐ A direct conversation with an EPA representative
- ☐ Presentations at local clubs and organizations
- ☐ Other _____

6. How interested are you in obtaining information about the following topics? (Circle one answer for each question)

	Not Interested				Very Interested	
a. EPA's Superfund program	1	2	3	4	5	6
b. Toxic wastes at the site	1	2	3	4	5	6
c. How the site might affect human health	1	2	3	4	5	6
d. How the site might affect the environment	1	2	3	4	5	6
e. Site cleanup decisions	1	2	3	4	5	6
f. Other _____						

7. What is the best way to get your participation? (Check the ONE you most prefer)

- ☐ Through opportunities for you to give written comments.
☐ Through public meetings where you can voice your comments.
☐ Through opportunities for you to meet and talk informally with EPA staff.
☐ Through a toll free telephone number you can call with your comments.
☐ Through a community group which discusses issues and concerns with EPA.
☐ Through opportunities for you to talk with independent experts.
☐ Through a web site for you to communicate with us.
☐ Other _____

8. Please tell us whether you have ever: (Circle your answer for each question)

- | | | |
|---|-----|----|
| a. Provided information to EPA about the project and its history. | Yes | No |
| b. Expressed your concerns about the project to EPA. | Yes | No |
| c. Offered cleanup suggestions or advice to EPA. | Yes | No |
| d. Given EPA comments on materials available for public review. | Yes | No |
| e. Requested information from EPA about the site. | Yes | No |

If "no" to all of the above, why not?

9. Can you accept the decisions EPA has made so far about the site cleanup? (Check one)

- ☐ Yes
☐ No
☐ I am not aware of any decision EPA has made

10. Is there anything else you would like to tell us about EPA's community involvement efforts or about this cleanup project?

Thank you for taking the time to share your views with us! To get on the EPA's existing mailing list, please contact _____.

EPA estimates the individual burden for completing this survey to be 15 minutes. On average there will be about 300 respondents to the survey, for an overall public reporting burden of 75 hours.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR Part 9 and 48 CFR Chapter 15.

Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW, Washington, DC 20503, Attention: Desk Officer for EPA. Include the EPA ICR number and OMB control number in any correspondence.